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**AIR CONDITIONING AND
REFRIGERATION**

News

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INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week

**It's a Different Language
Of This We ARE Proud
Twentieth-Century Aesop
Argument for Rearmament
The 'Good Old Days'
Quotable Quote
Stop and Think**

Story of the Week

Two "grey market" steel peddlers were awaiting their turn to see the purchasing agent of a certain manufacturer in our industry. "Dope" was in the reception room at the same time.

Recognizing these characters, and justifying our eavesdropping on the grounds of "reporter's privilege," we bent an ear.

"Why, you black-hearted so-and-so," we heard, "you can't say anybody has ever questioned my reputation for honest dealings!"

"Hell no!" growled the rival grey-marketer, "nobody's ever mentioned it."

It's a Different Language

Everybody in our industry goes overboard for the Australian customers who visit us occasionally. They're wonderful, colorful characters, these Australians, and we Americans are fascinated by them.

Not the least among their charms is their sometimes startling manner of speaking. In Australian parlance, for example, a "screw" isn't what you think it is. It's Aussie slang for "salary."

And, "knocked up" means "tired out." (For further hilarious examples of Australian slang, see our book, "Let's Go to Australia." Price: \$2.75).

In their pronunciation of the so-called English language, the Australians have a "dialect" which is a never-ending source of delight to midwestern Americans. Example: A "bison" in this country is the proper name for our almost-extinct native buffalo. To an Australian, however, a "bison" is a hotel washbowl. And a native is a "nightive," and fishermen's bait is a "bite." This sort of thing leads to endless rolling-in-the-aisles amusement when Australians and U. S. citizens get together.

Welcome, all visiting Australians! We love you all.

Of This We ARE Proud

Personable, agile-minded Henry Schmutz, Kelvinator's director of sales education, did us a big favor one afternoon last week. He invited us out to see a magnificent movie, which is entitled "Of This We Are Proud."

Gentlemen, it's terrific. It's colossal. We guarantee you, there won't be a dry eye in the crowd when any audience of American citizens—young or old—views it.

Pictorially, factually, suggestively, and emotionally, this inspired motion picture-with-sound lays the American cards down on the table, face-up. And it's a winning hand.

So-called "intellectuals" who carp, criticize, cavil, and complain about the "American System" (like Henry Wallace and his moptrap entourage) should be sentenced to witness this film.

And every future voter in the schools of this nation (and our allies) should have the privilege of viewing it, also.

America's natural glories are pictured therein, in gorgeous color. Free America's industrial achievements are touched upon, deftly. And America's rightfully grand

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Philco Ups Prices On Part of Its Refrigerator Line

PHILADELPHIA — Selective upward price adjustments on models in its refrigerator and home freezer line have been made effective by Philco Corp.

Increases in wage and material costs necessitated the price increases, the first since the 1948 lines were introduced in January of this year, according to Philco officials. The over-all increases average 2.2% at the retail level.

Following is the schedule of prices (old and new) on Philco refrigerators in zone 3:

Model	Old Price	New Price
780	\$199.50	\$209.50
781	239.50	249.50
882	279.50	289.50
883	299.50	309.50
1100	329.50	344.50

Home freezer prices are as follows:

AH-51	249.50	259.50
AV-75	329.50	339.50

Prices on the following refrigerator models were unchanged:

885	349.50
887	399.50
1085	379.50
1087	449.50

REMA-REWA Plan For Joint Meeting

CHICAGO—Preliminary plans for the joint meeting of the Refrigeration Equipment Manufacturers Association and the Refrigeration Equipment Wholesaler's Association at French Lick, Ind., on Oct. 21, 22, and 23, have been released following a meeting here of the two planning committees.

Both Rema and Rewa will hold board of directors meetings on Wednesday afternoon, Oct. 20, with a discussion of mutual problems over the dinner table.

Thursday morning, Oct. 21, will be left open for golf and to allow those attending from the east to get in by train.

A general membership meeting is scheduled to begin at 2 o'clock Thursday afternoon, with a cocktail party by Rema planned for the evening.

A joint program beginning at 9:30 o'clock Friday morning, Oct. 22, will feature two speakers from Rema and two from Rewa followed by discussion periods on problems affecting both groups.

A golf tournament is planned for Friday afternoon with an evening banquet scheduled for 7 o'clock.

Saturday, Oct. 23, will be devoted to product section meetings.

The planning committee found many changing and vital conditions facing both wholesalers and manufacturers and are working out a carefully planned program to bring these matters up for discussion.

Air Conditioning Is Only Real Hay Fever Relief, Experts State

CLEVELAND—An air conditioned enclosure is the best chance for the poor hay fever sufferer to get temporary relief from ragweed pollen. So states the American Allergy Foundation.

This year's crop of ah-choo addicts had better sneeze and bear it. "There just aren't any sure cures," the foundation said, "and there aren't any new wonder drugs."

Best bet for dealers is to watch each prospect carefully. If he sneezes, sell him a room cooler.

See 'Squeeze' for Dealers Handling Trade-In Boxes

By Phil B. Redeker

CHICAGO — A "squeeze" in the matter of handling refrigerator trade-ins faces appliance dealers, believes a man here who can qualify as an expert on the subject.

The individual who qualifies as an "expert" on refrigerator trade-ins is Telson J. Fineman, who with Robert S. Rivenburgh operates the Electric Center, Inc., here, a business of buying traded-in refrigerators, reconditioning them, and re-selling them. (The story of the Electric Center was reported in detail in the March 1, 1948 issue of the NEWS.)

Why does Fineman believe that the dealer may be caught in the middle on trade-ins? He offers the following series of reasons:

1. As supply comes closer to matching demand, trade-ins become a factor in sales—which they haven't been to much of a degree since the war. When the dealer can no longer blithely say "Go out and sell it yourself" to a customer who has a trade-in, it becomes a problem—a problem in terms of how much of his profit he may have to sacrifice in handling it.

2. Trade-in values and used refrigerator prices vary in accordance with the price structure of the new units. Dealers may take the trade-ins when values are high, and then find it necessary to get rid of them when prices of new merchandise is reduced. Fineman's personal view is that prices of new units are now near the peak and the trend will be down.

3. Dealers don't have the experi-

(Concluded on Page 4, Column 4)

Kelvinator Offers 10-Year Warranty On Water Heaters

DETROIT — A new 10-year warranty plan on Kelvinator water heaters has been announced by H. A. Willis, electric range and water heater sales manager, Kelvinator Division, Nash-Kelvinator Corp.

Willis said the warranty applies to all current Kelvinator models equipped with the company's new anti-corrosion feature, a special alloy magnesium rod.

The 10-year warranty provides for immediate replacement with a comparable model of a heater that becomes defective during its first year of operation. If flaws appear between the second and fourth years, a new heater will be supplied, with installation and transportation costs alone charged to the customer.

For troubles arising from the fifth to tenth years of operation, the customer will be supplied with a new heater at a discount based on a sliding scale, declining according to the age of the original heater.

Willis said the company's usual one-year warranty continues in force

(Concluded on Page 4, Column 4)

Electrical Leagues To Convene Sept. 29-Oct. 2

NEW YORK CITY—The 13th annual conference of the International Association of Electrical Leagues will be held Sept. 29 through Oct. 2 at the Mayflower hotel in Washington, D. C., Stanley E. Strunk, president, announced.

Strunk also announced appointment of the following program committee: A. H. Kessler, Minneapolis, chairman; J. Clark Chamberlain, San Diego; J. J. Dore, Omaha; W. G. Hills, Washington, D. C.; and A. L. Maillard, Indianapolis.

One-Third Down, 15 Mos. To Pay Probable Limit for Appliances

Sales Commissions on Repair Parts Called Wage-Hour Law Factor

DETROIT — An alleged violation of a comparatively minor provision of the Wage-Hour Law regarding overtime payments involving commissions on the sale of repair parts by servicemen has been charged against a Detroit contractor by the local enforcement agency handling the law.

Although the difference in wage payments in this case and most others of a similar nature is only a few cents, compliance with the law will necessarily be required in all instances, it was indicated by the Detroit office of the Wage-Hour Division.

Involved is the provision of the law which requires that extra payments such as bonuses or commissions paid to a refrigeration serviceman for the sale of repair parts must be included in that man's base pay, on which overtime is computed at time-and-a-half after 40 hours work in one week.

There are some "ifs" involved, however, in the applicability of this provision of the law, it is emphasized.

First, the employee must be "covered" by the Wage-Hour Law. It is only during those weeks when he has performed some work in interstate commerce that he will be covered. Such work, for example, would include refrigeration servicing or installation for a firm engaged in interstate commerce. Even if the employee works only a small part of the week in interstate commerce, he is covered by the law for the whole week.

Second, the employee must work more than 40 hours a week.

A typical example of how the pay rates should be figured would be as follows:

Suppose a refrigeration repairman

(Concluded on Page 4, Column 5)

June, 6 Months Sale Of Washers Increase

CHICAGO — Factory sales of 386,685 standard-size washers for the month of June exceeded by 22.8% the total of 314,705 units sold for June last year, and were the fourth largest for any month in the industry's history, according to figures released by the American Washer & Ironer Manufacturers' Association.

The June figure was 6.6% above the number sold in May of 1948.

Sales for the first six months were 2,259,775 units, representing a 28.7% increase over the like period of 1947 in which 1,754,639 machines were sold.

Ironer sales of 270,569 units for the first six months of 1948 compared to a volume of 268,309 for the same period of 1947, the association indicated.

The three months in which sales surpassed the 386,685 figure set in June 1948 were October, 1947, with 397,113; and March and April of 1948 with 389,298 units and 393,660 respectively.

Predict 300 More New Supermarkets This Year

NEW YORK CITY—An additional 300 supermarkets will be opened between now and the end of 1948, according to a statement released by the Super Market Institute. Five hundred supermarkets have already been opened this year.

More than \$400,000,000 has been invested in building and expanding this type of retail outlet since the end of the war, the institute reported.

Believe Federal Reserve Will Follow Controls Set In Regulation 'W'

WASHINGTON, D. C.—With authoritative predictions that President Truman would sign the anti-inflation bill calling for credit controls, the Federal Reserve Board, which is given power under the measure to set up the regulations, is giving quick consideration to a program, with the best bet being that it will use the old Regulation "W" measure, calling for one-third down and 15 months to pay the balance.

When the regulation is formulated it will be published in the Federal Register, and the board is expected to specify a period—probably of 30 days—between publication in the Register and the date on which the controls of instalment selling will become effective.

The other part of the legislation, authorizing the board to increase the reserve requirements of banks, may also have a definite effect on the activities of dealers in appliances and commercial refrigeration equipment, as will be explained later.

Retail groups are protesting against the instalment credit regulations, but it is felt that protests are useless now, and efforts are being directed towards "liberalizing" the old Regulation "W" rules to the extent of extending the period for payments to 18 months, and possibly longer for amounts over \$1,000.

If the new regulations follow the provisions of Regulation "W" which expired in November, 1947, they will demand a one-third down payment and the balance in 15 months on the following appliances:

Mechanical refrigerators of less than 12 cu. ft. rated storage capacity (including food freezers); cooking stoves and ranges, washers, ironers, dishwashers, room unit air conditioners, radios and radio-phonographs, sewing machines, suction cleaners.

Under regulation no article having a cash price of \$50 was subject to the regulation, and transactions on items over \$2,000 were not covered. (It is quite probable that this limit may be raised in view of the inflated prices.)

Under Regulation "W" the amount given by the dealer on a trade-in could be deducted before figuring the amount of the down payment.

For example, suppose an appliance had a sales price of \$140. If the dealer agreed to give the prospective buyer \$20 on a trade-in, he could—under Regulation "W"—deduct the amount from the sales price before computing the down payment. Thus the price on which the down payment would be computed would be \$120.

The regulation also stated that before an appliance could be put into a prospect's home on approval, a deposit equal to the necessary down payment would be required.

The fact that the Federal Reserve Board is empowered to reinstate instalment credit controls without being enabled to put controls on charge accounts is charged with being discriminatory to the independent dealer in appliances and furniture.

It is felt that department stores, offering a grace period of 60 or 90 days on home furnishings purchases, will attract some of the business of those who are looking for a "nothing down" proposition.

The National Retail Furniture Association has made a direct protest on this point, wiring a House committee the following:

"Users of consumer instalment credit are entitled to receive privileges accorded to consumers able to pay cash or buy on other short-term payment arrangements. Any control that fails to take cognizance of equal buying privileged rights will result in

(Concluded on Back Page, Column 1)

Freezers, Refrigerators Make Largest Gains In Western Sales Report for May-June Period

SALT LAKE CITY—Home freezers and refrigerators marked up the largest sales gains during May and June of any major appliances sold by dealers in Utah and western Colorado, the utilities serving those areas reported recently.

The report, issued by the Utah Power & Light Co. and the Western Colorado Power Co., revealed that automatic washers, water heaters, and electric ranges also showed gains during those two months.

Conventional clothes washers, ironers, and driers reported losses, however.

Percentage gains and losses for each appliance were: home freezers 23%, refrigerators 21%, automatic washers 20%, water heaters 9%, ranges 3%, ironers -4%, clothes driers -12%, and conventional washers -16%.

Sales of these appliances for the two months and for the year to date are as follows:

Appliance	May-June Sales	Year to date	Dollar-Value Year to date
Electric Ranges	2,026	5,193	\$ 908,775
Refrigerators	3,382	8,007	1,601,400
Home Freezers	345	846	211,500
Water Heaters	1,602	3,814	438,610
Clothes Washers, Conventional	2,166	6,188	618,800
Clothes Washers, Automatic	867	2,284	513,900
Ironers	410	1,156	86,700
Clothes Driers	43	138	31,050

You Can Freeze Beer?

Research Shows Ale Frozen In Cans Will Keep for 7 Hours If Wrapped In Paper

BRIDGEPORT, Conn.—You needn't drink lukewarm beer next time you go on a picnic.

That's the good word from the General Electric Consumers Institute, which has completed tests to determine how to keep beer cool and refreshing long after you've taken it off ice.

The answer: Freeze it in a home freezer, then wrap it in dry newspaper.

The Institute says that beer handled in this way will keep cold for 7½ hours even on days when the temperature soars over 80° F. What's more, there is no loss in zip or flavor.

The G-E tests were made on both cans and bottles of all sizes and shapes, and with several types of wrappings. Following are the In-

stitute's recommendations:

Freeze canned beer only. Bottles are likely to break.

Don't freeze a can of beer more than once. Repeated freezing and thawing upsets the chemical balance.

Wrap the cans when you take them from the freezer in about 17 layers of dry newspaper. A dry turkish towel will do just as well.

If you plan to drink the beer less than 7½ hours after you leave home, simply use somewhat thinner wrappings.

According to the Institute, frozen beer that is not wrapped is too warm to drink after only 2½ hours' exposure to an outside temperature of 80. On the other hand, properly wrapped frozen beer is too cold and icy even after five hours' exposure to the same temperature.

Court Rules Bldg. Owner Cannot Evict Dealer Without Sufficient Cause

ALBANY, N. Y.—In a far-reaching decision, City Court Justice Herzog here ruled that the Swire Appliance Co. cannot be evicted from a store site in the DeGraff Building, 29 S. Pearl St., even though the appliance firm has moved the major part of its business to 14 S. Pearl St.

The decision is believed to be the first court ruling on the commercial rent law.

Justice Herzog said the new law gives commercial tenants much the same privileges in avoiding eviction as have been held by household tenants for six years.

In reviewing the testimony Justice Herzog said that last fall the Swire firm was approached by the J. & S. Operating Corp., owner of the DeGraff building. The owner proposed that the lease held by Swire, providing for a rental of \$3,000 a year, be torn up. In exchange the owner offered a five-year lease at from \$4,500 to \$4,800 a year.

The Swire firm rejected the proposal and instead took a lease on the property at 14 S. Pearl at \$7,200 a year. It moved to the new quarters last December, but continued in possession of the DeGraff building store, using it somewhat as a warehouse.

The lease on the DeGraff building store expired April 30 and the owner started the eviction action, contending the Swire firm was not using the quarters for store purposes.

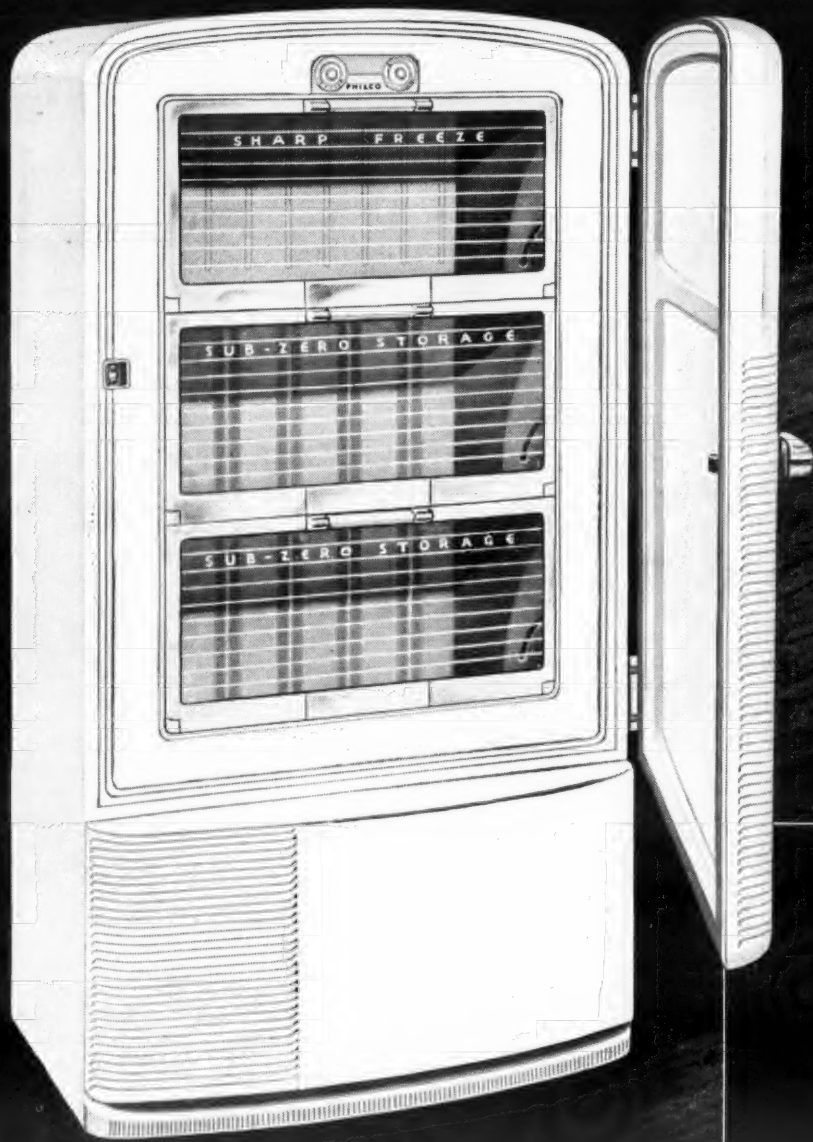
But Justice Herzog said that allegation did not constitute sufficient cause for eviction under the rent control law, and his ruling permits Swire to continue to occupy the quarters.

Home Appliance Salesmen Get 12 Lessons from Mme. La Zonga

SALT LAKE CITY—Twelve possible reasons for the loss of a sale were outlined for the benefit of appliance salesmen in a recent issue of *Electro Dealer*, house organ of the Utah Power & Light Co. here.

The reasons, quoted from a leaflet originally distributed to an automobile sales organization, are:

1. I was a sneak thief. The customer caught me in the act of trying to sneak my way to an order through exaggeration and misrepresentation.
2. I went after bear with a bean shooter. I had big guns—manuals, films, and charts—but didn't fire them. I yielded to the temptation to turn up my nose at selling tools and guns furnished by my distributor.
3. I actually shot myself with my own ammunition. I used my guns, but so clumsily they killed me. I balled up my demonstration because I did not rehearse in advance. I confused showmanship with show-offmanship.
4. I was an information nudist. I tried to make hot air pinch hit for facts.
5. I attempted to short-cut to home plate. I told an incomplete story, failing to cover important points. I failed to touch each base.
6. I got into an argument with the customer, which I won. But I paid the price of losing the sale in order to have the pleasure of winning the argument.
7. My competitor's product was cheaper and I didn't get hot enough to take the "ice" out of "price." I failed to evaluate other factors besides initial cost.
8. I didn't talk my prospect's language. I didn't keep my language simple. I put on the dog and the dog bit me!
9. I was a poor closer. I lacked courage to ask the customer to buy. The dotted line made me dizzy. I became confused and forgot the necessity of a clean cut summary.
10. I kept my big mouth open too long. I talked myself into the sale and then out of it.
11. I didn't generate enough desire for my products and services. I didn't find that dominant buying appeal and concentrate on it.
12. I neglected my customer too long. My competitor beat me to it because he was there asking for the order.



PHILCO AV-75

Ready
Now For
Delivery!

Sensational New 7½ cu. ft. Upright

PHILCO
FREEZER

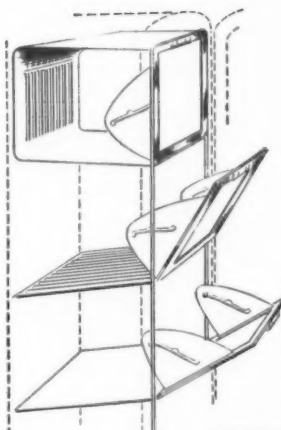
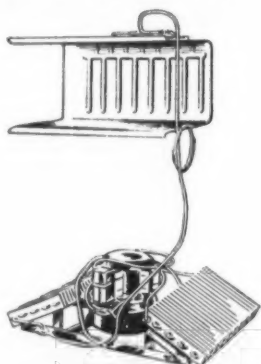
HERE it is... from Philco... a new sensation in home freezers. An upright, offering big 7½ cu. ft. capacity in minimum space. With new, exclusive features of service and convenience... to bring Philco dealers even greater freezer sales and profits... starting right now! There's a virgin market waiting for this big Philco Upright. Be ready to make prompt deliveries. Get the facts from your Philco Distributor.

EXCLUSIVE FEATURES • ADDED CONVENIENCE

HERMETICALLY SEALED SYSTEM

Entire system is hermetically sealed; has surplus power for sharp freezing under all climatic conditions.

- GUARDIAN BELL, battery operated. Warns of current failure.
- BUILT-IN LOCK protects freezer contents from unauthorized persons.
- QUALITY CONSTRUCTION, inside and out, for years of dependable service.
- 5-YEAR WARRANTY protects owner from service expense on hermetically sealed system.



3 COMPARTMENTS— ONE FOR SHARP FREEZING

Easy to get at, see into, keep foods arranged. Freezes and stores foods at approved sub-zero temperatures, as low as 15 degrees below zero.

PATENTED SLOPING SHELVES WITH 2-POSITION DOORS

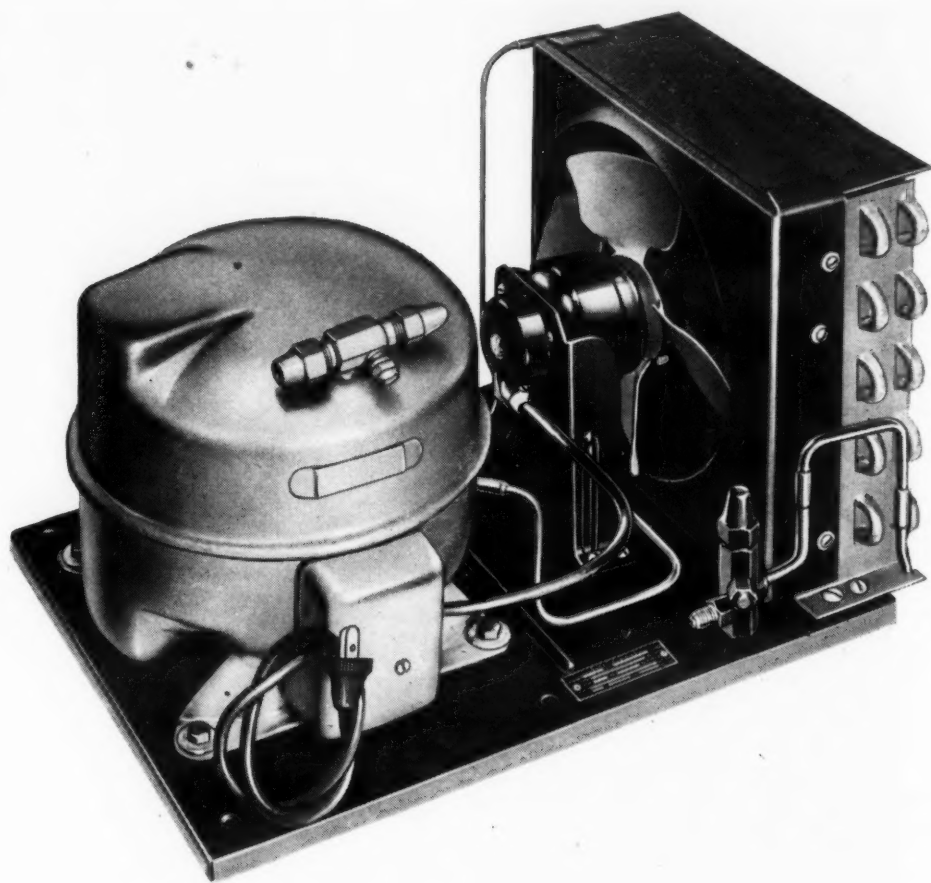
Shelves slope toward the back; doors open downward to 2 positions, partially open, wide open—Philco features that reduce cold loss.

TEMPERATURE CONTROL AND THERMOMETER

Regulates cold in all compartments. Thermometer tells sharp freezing temperature.

PHILCO Famous for Quality the World Over

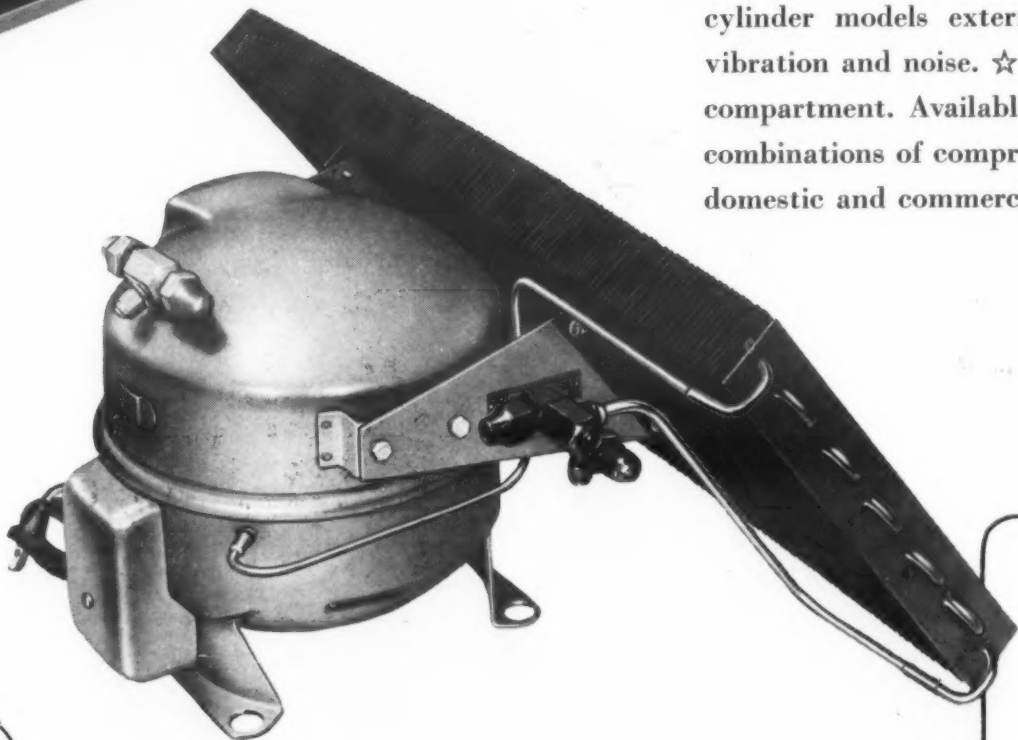
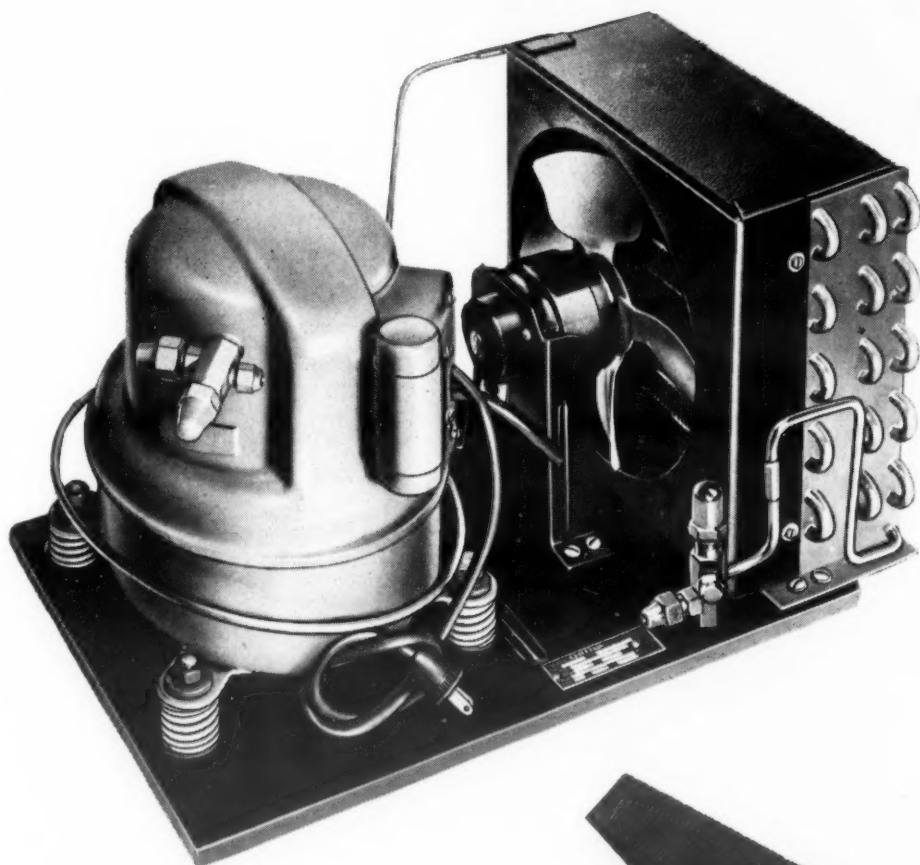
Over a Million a Year!



TECUMSEH HERMETIC UNITS LEAD THE INDUSTRY IN QUANTITY AND QUALITY

You don't have to dig deep . . . just scratch the surface and you'll find plenty of good substantial reasons for the industry's preference for reliable Tecumseh Hermetics. They're smooth, quiet, dependable in operation . . . compact, sturdily built . . . designed, engineered and produced to give you maximum long-life performance at minimum cost.

And take a look at some of their details of extra-value construction: ☆ Careful selective fitting of all moving parts assure high volumetric efficiency, economical operation and top trouble-free performance. ☆ All bearings are super-finished by diamond boring, bearingizing and Micromatic honing; limits of .0001" (one ten thousandths part of an inch) held on bearing parts. ☆ Suction intake above the motor practically eliminates oil circulation through the system. ☆ Intake and discharge mufflers effectively eliminate all pumping noise. ☆ Forced feed lubrication assures constant oiling of all reciprocating parts. ☆ Starting relay current actuated . . . nothing to wear out. ☆ Temperature and current actuated overload protector prevents overheating of the motor from any cause. ☆ Fusion welded steel shells . . . hermetically sealed, tamper-proof. ☆ Fan motor sealed in oil. ☆ Single cylinder models internally spring mounted, twin cylinder models externally spring and rubber mounted for freedom from vibration and noise. ☆ Compactness of design reduces space required for unit compartment. Available in models from $\frac{1}{8}$ to $\frac{1}{2}$ horsepower . . . with various combinations of compressors, motors and condensers to cover a wide range of domestic and commercial applications. Write for complete information today.

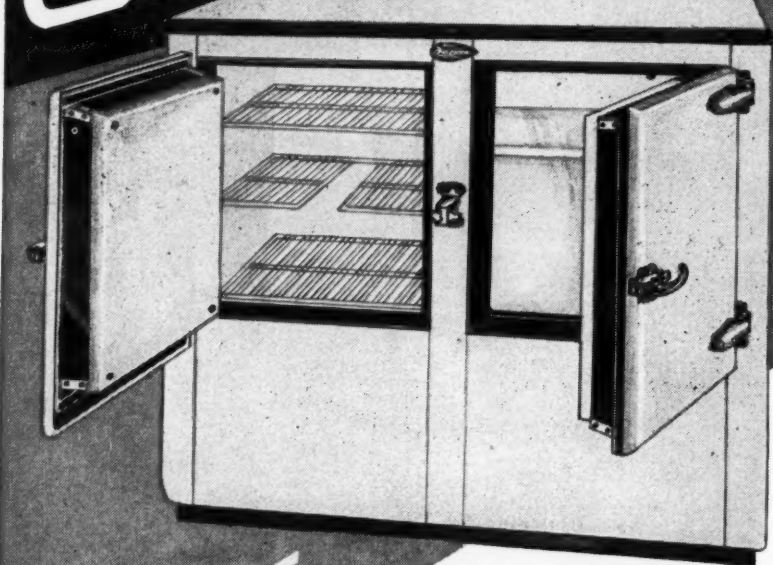


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Tecumseh, Michigan

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*The world's largest independent
producer of compressors and
condensing units for the
refrigeration industry . . .*

Sanitary Quickfreez



TRIZONE

For Every Food Keeping Need

4.5 cu.ft. of normal refrigerator operating at 40° Ave. with 6.25 cu.ft. of zero frozen storage for 250-300 lbs. of meat. 48 1/2" W x 28" D x 40 3/4" H. No. C-1148 **\$399.50**

SANITARY REFRIGERATOR CO.
FOND DU LAC, WISCONSIN
Manufacturers of
Quality Refrigerators for Over 40 Years
QUICKFREEZ Farm Locker Plants Since 1939

Wholesalers' Sales Increased In June

WASHINGTON, D. C.—Additional trading days helped the June sales of independent wholesalers to rise 4% over the May level, the Commerce Department reports.

Of the \$5,476 million in sales registered for this period, \$2,006 million resulted from the sale of durable goods. Though but a slight increase over May's volume of \$1,940 million, it reflected a definite upswing over the \$1,699 million worth of such business recorded in June, 1947. Most all items in this category climbed above the figure reached in June of last year, the report showed.

Largest increase in the durable goods group was that among metals and machinery where a June, 1948 total of \$543 million compared with \$514 million in May and \$458 million during June, 1947.

Airo Is Wholesaler For Universal Cooler

CHICAGO — Airo Supply Co., refrigeration equipment wholesaler here, announced that it has been franchised as a wholesaler for Universal Cooler products.

The firm said it will stock a complete line of Universal Cooler hermetic units from 1/2 hp. to 1/2 hp. inclusive and commercial remote units, air and water cooled, from 3/4-hp. and 15-hp.

It will also carry a complete line of Universal Cooler parts for all models.

'Squeeze' In Trade-Ins--

(Concluded from Page 1, Column 3)

ence to determine the correct value of trade-ins. "There are some boxes that aren't worth carting away for junk," Fineman says, "but our experience with dealers who try to sell them to us reveals that they have little knowledge of the trade-in market or trade-in values."

4. In Chicago (and probably some other metropolitan centers) apartment house replacement sales are on the increase. Significance of this, Fineman says, is that large numbers of trade-ins are dumped on the used refrigerator market, tending to restrict the market for the ones the dealer has for sale.

What's the answer to the "squeeze" if it comes? For one thing, dealers may find it helpful to work with some outfit—Electric Center being an example, naturally—that knows the ins-and-outs of the used refrigerator business.

But he thinks that the dealer may need something in the way of a more tangible bit of assistance—a sort of trade-in allowance arrangement in the pricing structure that will permit him to give somewhat inflated allowances without hurting his margin of profit too badly.

Electric Center has found a continuing good market for trade-ins this year, although the market began to fall off after the end of July. Better than 50% of its sales of used refrigerators have been to Chicago's negro population.

Fineman reports that it has become increasingly difficult to get sales of used refrigerators financed. Even where the prospective buyer has a record of steady employment over a two-year period, finance companies are turning the paper down if the man has any sizable debts outstanding against him.

This is leading Fineman to give consideration to some other methods of handling used refrigerator sales, possibly a meter plan or rentals.

Electric Center takes the used boxes taken as trade-ins by the Weiboldt chain of department stores in Chicago, which has done some rather extensive newspaper advertising this year on the fact that it will take trade-ins. Fineman says that trade-ins have been coming at the rate of around 30 a month from this chain.

He is pretty certain that some other department stores (with whom Electric Center does not deal at present), have taken in quite a few trade-ins this year, and he is curious as to what they have done with them. He has a hunch that they may be saving them up for a "splash" promotion effort.

Sales Commissions and Wage-Hour Law--

(Concluded from Page 1, Column 4)

received \$1 an hour and worked 44 hours a week. During one week when he was covered by the Wage-Hour Law he sold enough repair parts to earn a commission of \$4. His total straight time would then be \$48 for that week, not \$44.

To arrive at his overtime rate, divide the total straight time earnings (\$48) by the hours worked (44), which gives the average earned hourly rate for the week of \$1.09.

Since he has worked four (4) hours of overtime, he has four (4) additional half hours at this new rate due him as legal overtime.

Multiplying half of the hourly rate of \$1.09 by four (for the number of overtime hours), or simply multiplying \$1.09 by two (2), gives the overtime pay of \$2.18. Added to the straight time earnings of \$48, this makes the total pay for the week \$50.18, as tabulated below:

Straight time pay.....	\$44.00
Commission	4.00
Overtime pay	2.18

Total Pay\$50.18

Now, if the commission payment of \$4 had not been included in determining the straight time pay, the overtime pay would have been incorrectly figured as \$2, not \$2.18. (That is, multiplying half of the hourly rate of \$1 by four gives \$2 as overtime.)

So the total pay would be wrongly figured as \$50.00.

Another point brought out in the particular case involving the Detroit contractor, is that the law requires that overtime payments be paid to the employee at the same time he receives his regular pay for that week, or at least no later than the following week.

The Detroit contractor allegedly had been paying the commissions once a month.

Fitch Heads Sales of Ward Refrigerator Co.

LOS ANGELES—Gordon H. Fitch has been named sales manager of Ward Refrigerator & Mfg. Co. here, manufacturer of commercial refrigerators.

Fitch has been with the Ward company for some time in an executive capacity. He succeeds S. E. Talbot.

Feldmann Takes Control Of General Instrument

NEW YORK CITY—C. Russell Feldmann, board chairman and president of International Detrola Corp., recently acquired a controlling interest along with Richard E. Laux in the General Instrument Corp.

As an outgrowth of the move Feldmann also becomes chairman of the board at General Instrument and Laux becomes president and treasurer. General Instrument, which produces radio and television components, will have two other new members on the board. They are: Harry E. Collin, Toledo investment banker, and Kenneth C. Meinken, president of the National Union Radio Corp.

Laux has been executive vice president of General Instrument.

Kelvinator Warranty --

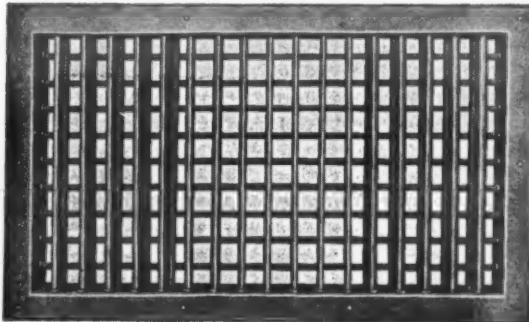
(Concluded from Page 1, Column 3)

on all heaters not equipped with the magnesium rod.

The new rod was designed by the Dow Chemical Co. for use in parts of the country where the chemical composition of water exerts a highly corrosive effect on the galvanized lining of hot water storage tanks, causing early failure.

The special alloy rod, installed inside the heater, causes an electrochemical reaction which slowly dissipates the rod and forms a protective film over the zinc coating of the tank liner. The film protects the liner against corrosion, and prolongs the life of the tank.

ADD 4-WAY DIRECTION CONTROL TO YOUR COOLING SYSTEM . . .



ALTON AIR SUPPLY GRILLES

WE CAN DELIVER! . . . ALL SIZES!

- All-metal, welded casings . . . flush mounting
- "Tear-drop" blade design minimizes resistance
- Each blade individually adjustable
- Even distribution—uniform velocity

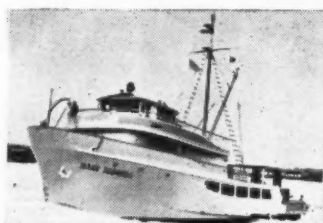
"Specially designed for Refrigerated Air Conditioning"

WRITE TODAY FOR COMPLETE INFORMATION FOLDER AND PRICES

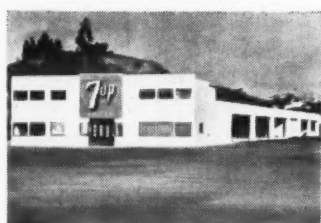
ALTON MANUFACTURING CO.
Cooling and Ventilating Equipment
1112 ROSS AVENUE • DALLAS 2, TEXAS • PHONE RIVERSIDE 3491



MEAT PACKING



FISHING BOATS



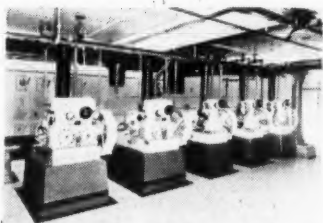
BOTTLING PLANTS



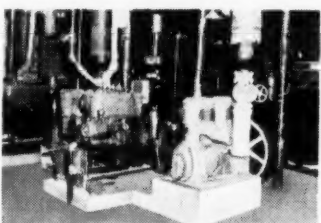
SKATING RINKS



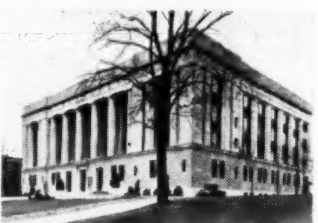
BREWERIES



LOCKER PLANTS



QUICK-FREEZING



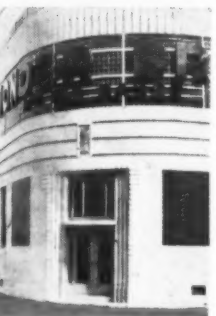
OFFICE BUILDINGS



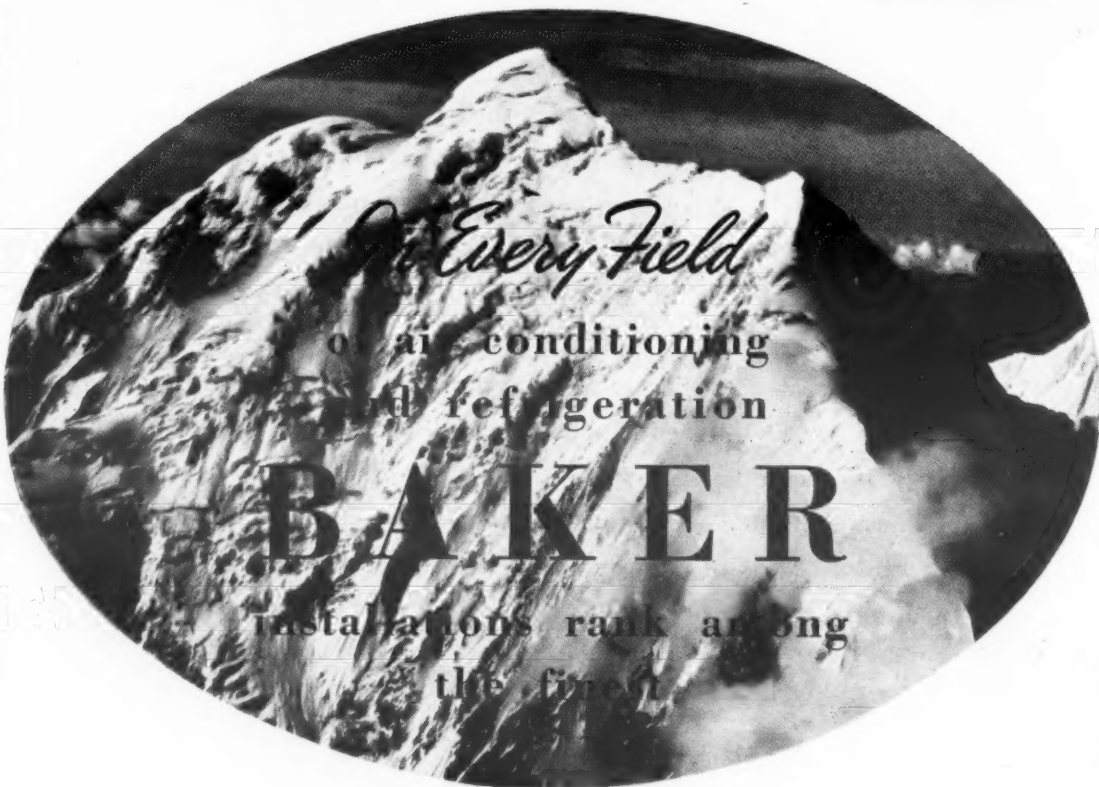
HOTELS



THEATRES



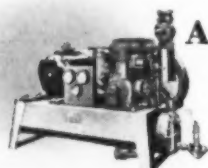
BAKERIES



At the heart of thousands of successful, high performance installations, lie Baker equipment and Baker engineering. For both Freon and Ammonia, Baker offers one of the world's widest lines — backed by over 40 years of experience in all phases of air conditioning and refrigeration. Franchises are open for qualified distributors in some territories. Write today for complete details.

Zone balanced • Engineered

BAKER



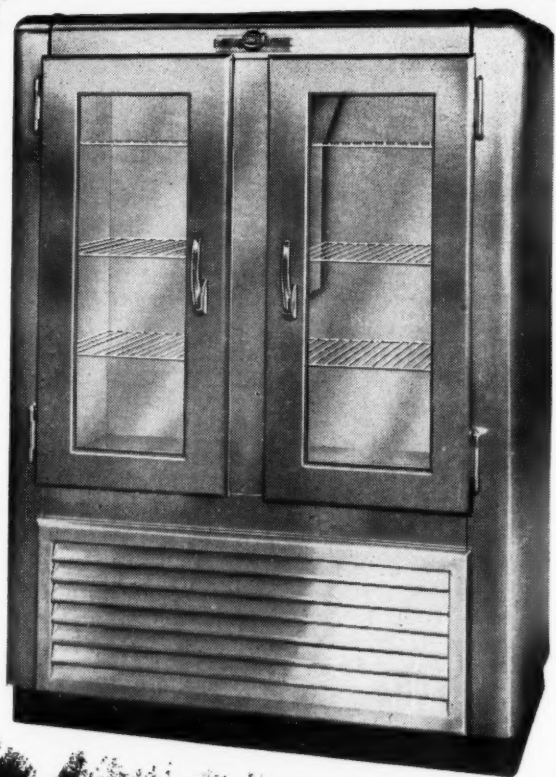
AIR CONDITIONING AND REFRIGERATION

FACTORIES AT OMAHA, NEBRASKA AND SOUTH WINDHAM, MAINE • • GENERAL OFFICES AT SOUTH WINDHAM, MAINE

VIMCO PIONEERING



... brings you the world's finest 100%
all metal constructed stainless steel
REFRIGERATED CASES



REACH-IN-CASE
Model #RS-20B
with blower also
made in 30-42-
47-65-70 and 90
cu. ft.

WHY are these streamlined cases so outstanding in quality, workmanship, practicability and sparkling beauty? The answer is foresight—pioneering—research—the aim to make a finer, more durable, more useful refrigerator that will more fully meet your requirements and yet be within your price limit.

Vimco's staff of engineers and designers skilled in the working of stainless steel because of long experience, developed new production techniques, refined designs and created cases entirely of metal—free absolutely of any wood.

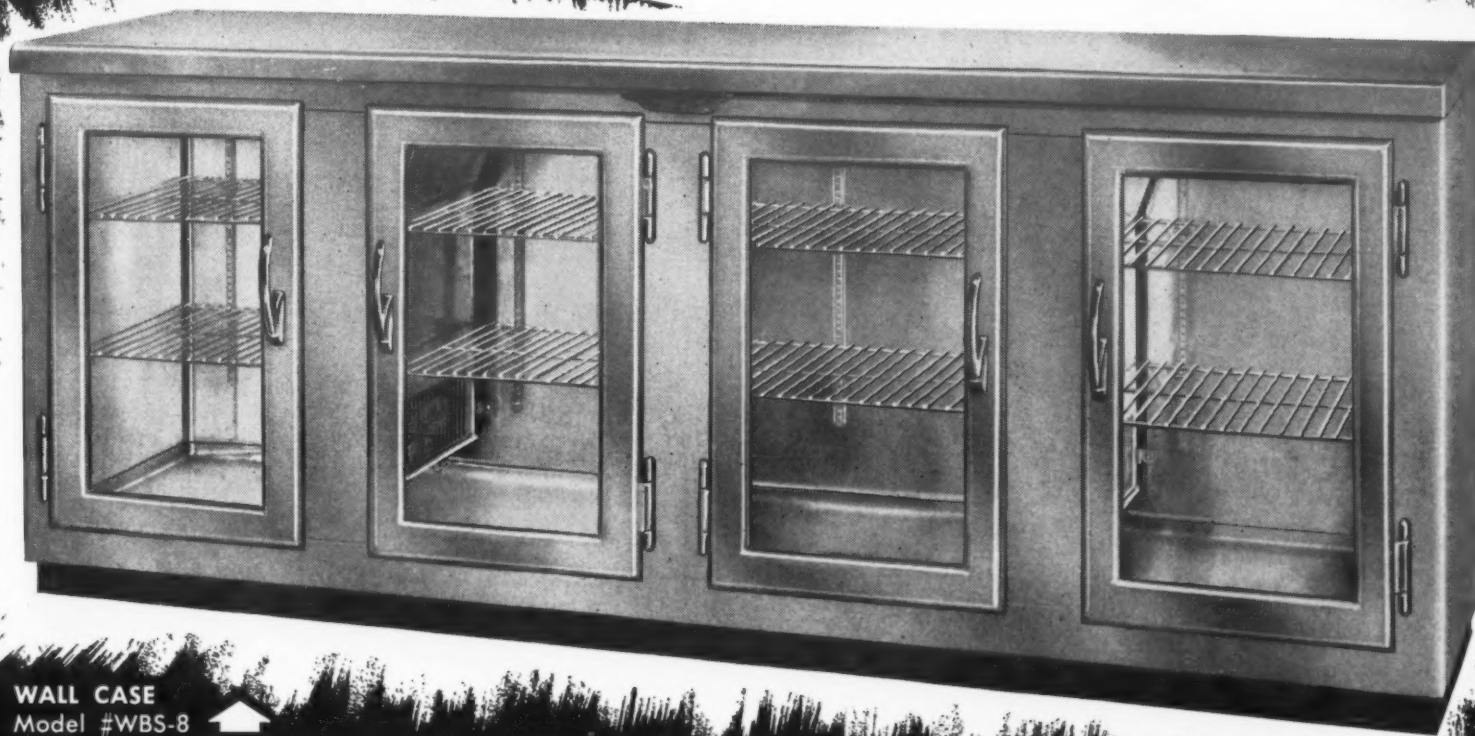
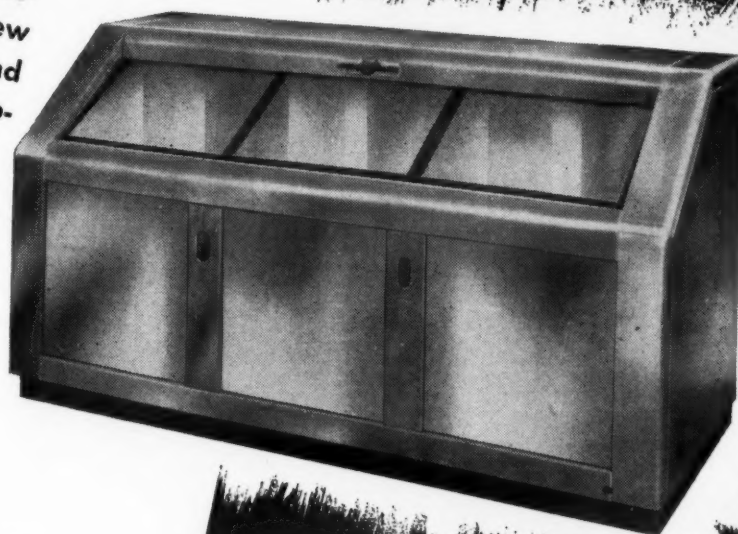
Pioneering and the constant seeking to create better and still better has also produced—

Solidly Welded Construction
Sanitary Inside Rounded Corners and
Outside Rounded Corners
Thermopane Glass Doors
and the refined finish of a jewelled watch

You will want a Vimco Refrigerated Case. There are models and sizes to meet every practical requirement. Write or wire today for catalog and complete data.

BOTTLE COOLER

Model #BS6 (Remote)
Also made in 4, 5 and 8H.



WALL CASE
Model #WBS-8

Also made in 4 ft. and 6 ft. sizes.



THE REFRIGERATION OF TOMORROW
Today!

Victory METAL MANUFACTURING CORP. 1300 S. FRONT ST., PHILA. 47, PA. • FUlton 9-3132
Direct Factory Representatives in all principal cities Export Division, 39 Broadway, New York 6, N. Y.



CLARK BRIDGMAN CO.

549 W. WASHINGTON BLVD.
CHICAGO 6, ILL.

Sales and Engineering
Product Coolers, Evap. Condensers
Air Conditioning, Liquid Coolers
Water Chillers, Heat Exchangers
Liquid Receivers

A. A. Reed, 14 Poplar Park, Pleasant Ridge, Mich.

R. R. Gregory, P. O. Box 184, Easton, Ill.

R. E. Kenney, 4243 Crocker Ave., Minneapolis, Minn.

WILSON REFRIGERATION, INC.

- FARM AND HOME FREEZERS
- REACH-IN REFRIGERATORS
- WALK-IN REFRIGERATORS
- FARM MILK COOLERS

DIVISION OF WILSON CABINET CO., INC.
SMYRNA, DELAWARE

TELLING and SELLING

A GUIDE TO SMART ADVERTISING AND MERCHANDISING PRACTICES

This series of articles comprising ideas and principles for the small retail or manufacturing business is written by James D. Woolf, who was for more than 20 years a vice president and director of J. Walter Thompson Co., one of the largest advertising agencies. Out of his experience embracing all types of advertising and merchandising he brings his counsel to the small businessman who must plan his own advertising and promotional efforts.

By James D. Woolf

Your Priceless Asset

A few days ago, motoring through a Texas city of some 40,000 population, I happened to remember that my wife had asked me to bring home a coffee percolator of a new type she had been unable to find in her local stores.

While paying my luncheon check I asked the cashier for help. "Well," she said, "there are a dozen stores here that *might* have what you want. But since it's something special you are looking for, you'd better try Wilson's. They're usually first with the latest."

Seeking direction from a policeman on the corner, I mentioned casually that I was trying to track down a hard-to-find percolator.

"Wilson's," he declared, "is your best bet."

A reputation like Wilson's—a reputation of being on your toes—of being alert and up-to-date—of being first with the latest—can be one of your most priceless assets.



TWO KINDS OF 'FIRSTS'

But to be first with the newest items of merchandise is not the whole of it. Of equal importance is being first in SERVICE—first in thinking up little twists and angles—

the little "extras"—that make for customer satisfaction.

For example—

—the bakery shop that devised a special "sealtite" envelope for small change, thereby preventing its loss by children as they tote home a bag of cookies or rolls, or a loaf of bread;

—the laundry that, with a little gadget of its own invention, loosens up the buttons after the shirt is starched and ironed, thus preventing their being embedded tight into the fabric;

—the building supply dealer who stencils grade marks on his lumber and guarantees the accuracy of his gradings;

—the banker who provides check books for left-handed customers, with the stub part on the right and not on the left end of the book;

—the dairy that delivers its milk in bottles with corrugated necks, thereby preventing slippage from cold, wet fingers.

The newest in merchandise! The newest in service! The newest in IDEAS! That's the formula that wins—and the reason why I found a whole town telling me that "Wilson's is your best bet."

THE UNFORGIVABLE SIN

Dull copy is advertising's unforgivable sin. And much advertising is as dull and drab as old shoe strings.

The reason is the failure of the advertisers to say anything fresh and new and novel. No ideas, no imagination—just the same old generalities, the same prosaic claims, the same ancient bombast that advertisers have been dishing out since the Pilgrims sold the first string of beads to the Indians.

Dull copy is dull not so much because of poor writing. The fault lies usually in the subject matter. Words cannot ever be a satisfactory substitute for ideas.

If you have something in your business worth talking about—something fresh and interesting—either about your merchandise or your service, tell about it in simple, homely words, and you will have advertising that people will read. Don't fuss around with fancy writing.

LOOK FOR NEWS ANGLES

There is news in merchandise. Much of our time and energy and nearly all of our money goes into our purchase and consumption of goods.

KNOW the products you sell. Look for a news angle every time you write an ad. See if you can't find, in each instance, some special bit of information that the reader will find interesting and enlightening. I know a merchant, a feed dealer, who is wonderfully successful at doing this.

He is constantly reading up on grains and feeds. He studies all the literature sent to him by manufacturers. He devours government bulletins and the trade journals. He has assembled an astonishing library of "Ripley-Believe-It-Or-Not" information. Every piece of copy he prints has in it at least one interesting and useful fact that is not gen-

erally known. People look for his advertising; they enjoy reading it and find it helpful.

It is easy to see why this dealer is widely respected as being alert and up-to-date, why like Wilson's he has a reputation of being on his toes.

MAKE YOUR OWN NEWS

Use your imagination all of the time. There is no substitute for it in business. Neither hard work, nor sagacity, nor hard-headedness can fill the place left vacant when imagination is lacking.

The imaginative advertiser makes his own news. He does it first by doing what Wilson's does—he is constantly on the alert for innovations in merchandise. Is everybody talking about a new plastic cocktail tray, or a revolutionary new floor paint, or a new streamlined electric toaster, or a new-type lawn mower, or a remarkable household deodorant? All right, he has it! Isn't he the first with the latest?

For nearly two years I have been reading the national advertising of an unusual new weed-killer. My gardening friends have been praising it. But the hardware store where I sometimes deal doesn't carry it.

"Nope," he told me indifferently. "I don't have it. Can't carry everything, y'know."

An imperfect world invites you. Reflect a moment on your own experience as a consumer. You asked your dry cleaner to give the sleeves of your coat a "round press," but they came back with a razor-edge crease.

Two times lately the roofer has tinkered with your roof, but your



ceilings are damp again. After three weeks, repairs on your watch are not finished—and one week was the promise.

Yesterday, for the tenth time, you were outraged to find lipstick on your tumbler in a public restaurant. And your haberdasher delivers to your home a box containing six ties, but what you ordered was a scarf.

Despite the famed efficiency of American business, little is done by anybody that cannot be done better.

The door is wide open. With only a little extra effort you can be the Wilson's in your community—with a reputation of being on your toes—of being alert and up-to-date—of being the first with the latest.

And you will have outstanding advertising—because you will have some outstanding things to talk about.

Slash the 'High Cost of Eating'

FOR YOUR CUSTOMERS

with

BEN-HUR

FARM AND HOME FREEZERS

Every one among thousands of BEN-HUR owners will tell you that his freezer is his most profitable investment—it more than saves its cost by cutting the family's food budget—10 to 50%.

Here's your greatest opportunity to make hosts of friends—and sales. Show your prospective customer that every dollar he spends for the purchase of a BEN-HUR Farm & Home Freezer comes back to him—in the form of reduced food costs, food savings, time savings in meal preparation, better, more healthful meals all the year around. There's a BEN-HUR Freezer for every family's needs—6, 9, 12.5, and 18 cubic foot sizes. A few territories still available. Write!

Compare them all ... and you'll choose the Nationally-Advertised BEN-HUR Freezer Line.

BEN-HUR MFG. CO., Dept. AC

634 EAST KEEFE AVENUE • MILWAUKEE 12, WISCONSIN



BEN-HUR FARM and HOME FREEZERS

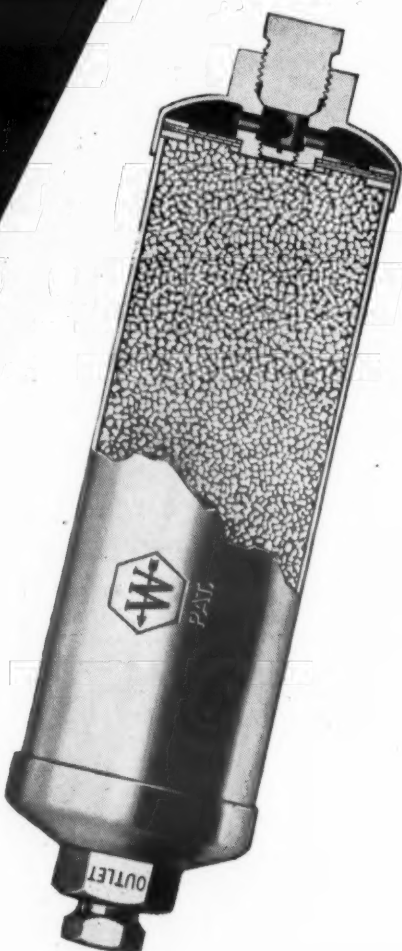
The Mark of Quality



DRY...

Normal Flow Without Pressure Drop

Weatherhead's newly designed silica gel dehydrators and filters assure thorough removal of moisture and impurities from refrigerants—with continued normal system operating efficiency.



Look Ahead with

THE Weatherhead co.

CLEVELAND 8, OHIO

PLANTS AT CLEVELAND, OHIO • ANGOLA, INDIANA • COLUMBIA CITY, INDIANA • HOUMA, LOUISIANA • ST. THOMAS, ONTARIO, CANADA

Tip for Designers**'Minor' Features Get Attention of Housewives In Appliance Buying Panel**

MINNEAPOLIS—With an eye to improving its appliance merchandising program and obtaining a "housewife evaluation" of its major and minor appliances, Gamble-Skogmo, Inc. has inaugurated a consumer buying panel for the continuous study and development of merchandise, merchandising programs and related services.

A part of the quality control department managed by Mel Sweet, and directly responsible to the office of the general merchandising manager, Everett Pennock, the consumer panel was originated last month to complement the company's activities on control of buying, competitive price and merchandising testing.

Gamble-Skogmo, Inc. has utilized an evaluation program of increasing proportions since 1939. However, prior to the development of the panel this information was obtained primarily by interview or by questionnaire.

STORES PICKED PANEL

To form the panel, each of the seven company stores in the Minneapolis metropolitan area nominated a group of housewives to study various models and brand lines of major and minor appliances.

The response of the nominees was most enthusiastic as they proceeded to note whims and fancies or preferences for both nationally-advertised and private-line brands, displayed adjacent to each other, according to store officials.

With the appliance samples side-by-side, panel members were given the opportunity of detailed comparative analysis. Each member completed a checklist which listed features of each of the lines which were compared.

REFRIGERATORS ATTRACT INTEREST

Outstanding interest was registered by each panel member on refrigerators, automatic washers and electric irons. Following in housewife interest were toasters and vacuum cleaners.

According to Sweet the results were "most gratifying" and will be the basis for continuing similar panels on a regular schedule, and possibly adapting a modification of the technique to other key distributive areas.

KEEN COMPARISON OF LINES

"It's surprising," Sweet added, "the significance these housewives attribute to what are considered usually as minor details. This is particularly evident when they have the competitive lines to compare feature by feature."

With the development of its new models of major and minor appliances already under way, Gamble-Skogmo,

Inc. does not intend to use the information obtained in revisions of lines to be introduced. The study did affirm changes in design and features which will be incorporated in new models, according to Sweet, plus the fact that housewife comment and interests will be of tremendous assistance in the creation of a merchandising program for the various appliances in the G-S line.

Gamble-Skogmo, Inc. distributes the Coronado line of appliances through more than 2,200 company-operated and dealer-owned stores in 26 central and western states.

Dept. Store Sales Rise 9% Over '47 for July 24 Week

WASHINGTON, D. C.—The Federal Reserve Board reported a 9% increase in dollar sales of national department stores during the week ended July 24, compared with the corresponding week of 1947.

The increase, identical with that for the preceding week, was shared by all reporting districts.

Biggest gain, 21%, was registered in the Dallas district. Sales were up the percentages indicated in these other districts: Cleveland, 15%; Atlanta, 13%; Chicago and St. Louis, 11%; Kansas City, 10%; Richmond and San Francisco, 4%; and Boston, New York, and Philadelphia, 3%.

Total sales were up 10% for the four weeks ended July 24 and 7% for the year to July 24 over the like periods last year.

Larger Indiana Dealers Toy with Idea of Opening 'Outlet' Stores Nearby To Move Slow Appliances

ANDERSON, Ind.—Some Anderson major appliance stores and departments of furniture stores, both independent and chain, are currently giving serious consideration to the establishment of the oldtime "outlet" stores to be operated entirely separate and apart from the regular stores and under different names.

This idea is already taking hold through the opening of additional stores, in two cases within a few doors of the parent store, and operated under a different name.

The underlying merchandising idea is the oldtime practice of having a place to unload slow movers and to stimulate sales volume in slow periods or in a "buyer's strike" market, by the simple expedient of either reduc-

ing prices in the outlet store, or offering heavy trade-in or other inducements.

Although this merchandising, as one manager explained, "is as old as the hills," another manager expressed the opinion that the time is not far off when price resistance will force such action. This "roundabout" merchandising practice will enable the parent store to maintain standard manufacturers prices and its reputation for quality merchandise sold on a quality price basis.

Whether the practice is a healthy one or not, one appliance manager takes the view that the events of the next few months may force some such action as a means of economic survival.

Now... that famous CROSLEY door!

... more than ever

the greatest feature in the appliance business!

Swing back that famous door and you swing wide the door to the easiest-to-get sales in refrigerator history! Start right out with the most powerful sales advantage ever known—the exclusive Shelvador*.

Only the Shelvador* places twice as much front row food right at a woman's fingertips . . . eliminates food-fumbling, spills, bending or stooping. Roomy, transparent food compartments have banished "hide and seek" food-searching.

What's more, *everyone* goes for that famous door—the Shelvador*—one of the many big reasons why you're "on velvet" with a Crosley franchise! See your Crosley distributor.

THE NEW CROSLEY Shelvador* REFRIGERATOR

MODEL SD 108

Capacity 10.5 cu. ft. refrigeration plus 1.53 cu. ft. in the Storabin



5 great new models

only CROSLEY has the Shelvador*

Shelvador* Refrigerators
Frostmasters - Ranges
Radios - Radio-Phonographs - FM-Television - Short Wave
Home of WLW

5 great features for more sales . . . more profits

A Shelvador* for every market . . . every pocketbook. FIVE outstanding, practical features that make it first for sales in '48. Just count 'em . . .

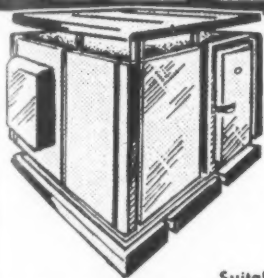
1. FREEZIN-COLD Compartment . . . for Frozen Storage
2. NORM-COLD Compartment . . . with Meat-Holder
3. MOIST-COLD Compartment . . . Food Conditioner Section
4. EVER-DRY STORABIN . . . Extra Dry-Storage
5. Exclusive SHELVADOR* . . . Time-and-Work-Saver

*® © 1948 CROSLEY DIVISION

CROSLEY

Division—**AVCO** Manufacturing Corporation,
Cincinnati 25, Ohio

RECO



Sectional
FREEZE-COOLERS
and
Hardening
ROOMS

Suitable for Zero or Medium Temperatures; Prefabricated, Lightweight. Simple to Erect, Move or Enlarge. 192 to 5000 Cu. Ft. Cap.

(REFRIGERATION ENGINEERING CORPORATION)

RECO PRODUCTS DIVISION

2020 Naudain Street, Phila. 46, Pa.

insist on
genuine

Marlo

products

MARLO-HEAT TRANSFER
Since 1925

'Look' Magazine Tells How Home Freezer Saves \$1,356 a Year, Many Hours of Work

NEW YORK CITY—Several million persons opened the Aug. 17 issue of *Look* magazine and read one of the most effective presentations yet of the home freezer story.

Under the heading "Less Work for Mother—An Efficient Family Solves the Problems of Living," a six-page picture story told how a Bergenfield, N. J., couple—Irvine and Rachel Millgate—reduced their food bill for a year by well over \$1,000 and increased the efficiency of home management in the last two years with the help of four home freezers.

Probably the most significant statement in the story was this:

"Skeptics often argue with Millgate that the cost of his freezers more than offsets his food savings. They don't. Millgate figures his equipment cost him \$1,200. Food savings the first year alone amounted to \$1,356. 'And after that,' he says, 'it's all gravy.'"

In 1946, *Look* reported, the Millgates decided to analyze the operation of their home—a 35-year-old very average dwelling. Their aim was to achieve an economy of both money and time without lowering their living standard.

"As a result of their study, they cut their food bill despite rising prices," the magazine said. "They eliminated many of the tiresome manual chores that cause family arguments. And they developed a sort of teamwork rarely seen in the average family."

"Their well-balanced, plentiful diet

that includes one meat dish a day, averages \$11.91 per week."

Key to the Millgate's food-and-time economy is preparation of food in quantity and liberal use of home-freezer storage space, it was pointed out.

"They have 36 cu. ft. available in four home freezers," the report continued. "They rent an extra 12 cu. ft. in a community locker."

"Their 20 by 40-ft. garden provides most of their fresh vegetables. Oranges and other fruits are purchased in quantity when prices are seasonally low, then juiced or preserved and frozen for year-round use."

"Irvine Millgate is a sportsman. Formerly he had to talk neighbors into sharing his fish or game. Now his catch goes into his freezers."

One of the many pictures in the layout showed Millgate selecting a chuck of beef with the assistance of a butcher. This illustrated the point that Millgate, a visual education director for the Boy Scouts of America, saves money by volume buying of meat and poultry.

In another picture, Mr. and Mrs. Millgate and their two children—Linda, 8, and Roy, 6—were grouped around the three freezers kept in the cellar. A year's supply of food is stored in these units and the one in the kitchen.

The fact that there is hardly any waste when meat is carved, wrapped, and frozen was illustrated by another cut. This one showed that Millgate had used almost all of a chuck of

Opportunity for Dealers

The article "Less Work for Mother" in the Aug. 17 issue of *Look* magazine is really a windfall for dealers selling home freezers. A more effective piece of promotion couldn't be imagined—an authenticated story in one of the nation's most widely best read periodicals that gives a graphic picture of the savings and conveniences that can be realized through use of the home freezer.

Believing that dealers may possibly want to purchase quantities of the Aug. 17 issue of *Look* for promotion purposes, the NEWS inquired and learned that extra copies may be purchased in quantities at a price of 11 cents each. Those interested should wire or write Abner Sideman, Look, 511 Fifth Ave., New York City.

beef in separating it into beef stew, ground beef, roasts, steaks, pot roasts, suet, and soup stock.

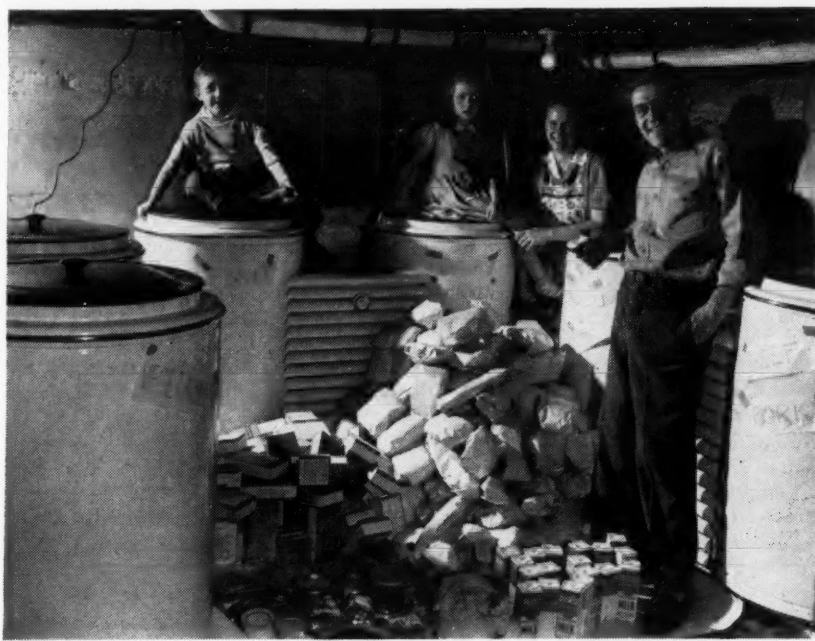
"Bones with bits of meat on them are used to make a large, several months' supply of soup stock at one time," *Look* noted.

Below the picture was this schedule followed by the Millgates in stocking their freezers:

April-June—storage of green vegetables and fish, peas, spinach, asparagus, beans, and rhubarb. July-September—Berries, broccoli, cauliflower, corn, and peaches.

October-November—Green vegetables are removed and used in prepared foods which are then refrozen; meats are stored in quantity. December-March—Breads, cakes, and pastries are stored to replace the space

Picture Story of a Way to More Efficient Living



"They stock enough food for a year," says the "Look" magazine outline for this picture. "Here they display the varied contents of the three freezers in the cellar. Still another unit is in the kitchen."



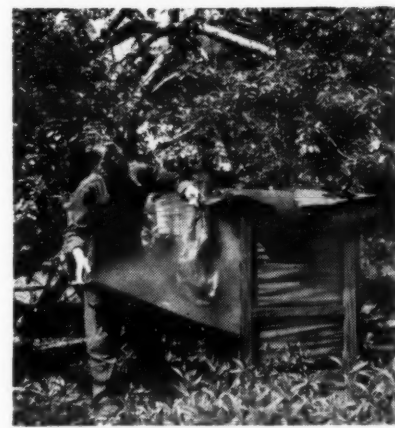
"Typical family project is making a month's supply of lunches for Daddy," is how this project is explained. "Roy butters bread, Linda wraps and marks each sandwich. Mrs. Millgate assembles the sandwich. Mr. Millgate slices the meat, cheese, and other ingredients. The large turkey was frozen twice, once before cooking and again after smoking."

formerly occupied by the vegetables. Continuing the account, the magazine illustrated how Mrs. Millgate prepares baked goods in quantity when storage space is available, using an ordinary modern kitchen oven.

"Home-baked bread costs 6½ cents a loaf," the outline said. "Dough may be frozen after it has risen once, is wrapped in individual loaves. Baked bread is wrapped in plicofilm before freezing."

In addition to use of the freezers, such things as use of paper plates and a motion study to eliminate waste movements in ironing have resulted in a saving of time and energy for Mrs. Millgate.

Before the Millgates worked out their economy program, Mrs. Millgate had little time for anything but the "daily treadmill of household chores." Now she can spend as much as three hours a day in the vegetable garden, teach Sunday school, work with the Girl Scouts, help her children with dancing and music lessons, entertain, type material for a book her husband is writing, and work on a book she is writing herself.



"Department of Agriculture sent directions for backyard smokehouse to prepare poultry, meat, and fish."

Under the present schedule, *Look* added, shopping and food preparation for freezing is a family operation three days a month, usually Saturdays. From November to February, it is one day or about 12 hours a month.



"They buy food cheaply in volume," "Look" captioned this picture. "With butcher's help, Millgate selects a chuck of beef. He also purchases whole lambs, several turkeys, and a dozen or more chickens at a time, gaining the savings of volume buying."

"Same insulation they use in the best commercial refrigerator cases!"

IT WORKS BOTH WAYS

...a swell feature to have
...a swell feature to sell

"Same insulation they use in most home refrigerators today"

OWENS-CORNING FIBERGLAS THERMAL INSULATION

Florist Case Blower Moves Air In Two Directions At Once, Protecting Petals

MINNEAPOLIS—The Raze Floral shop and Lyndale Nursery report a 10-15% cut in power costs since the installation a few months ago of a new Drayer-Hanson cooling unit and Hussmann condensing unit in their specially constructed floral case.

The florists revealed that flowers were being kept fresh and salable for as long as two weeks in the new refrigerated display cabinet. The cabinet was designed and built by Allied Store Equipment, Minneapolis, to fit the particular needs of the florist.

An even distribution of refrigerated air has been achieved through the first use in this area of a twin direction blower-coil-type unit which circulates air at slow speeds, enabling it to blow in two directions simultaneously.

The new unit eliminates the undesirable results found in the use of a high-velocity blower fan that sometimes blows the petals off of flowers and does not give even distribution of air throughout the case.

Allied built the case, that measures 10 ft. in length by 8 ft. in height and 3 ft. in width, with merchandising principles in mind. The front and sides of the box are of glass. Three thicknesses of the glass were used to eliminate fogging and to present a clear view to customers.

The walk-in has been lined with mirrors which give greater depth to it and acts as a clever means of increasing customer interest in the floral display inside. The management reports customers are impressed with the refrigerator which has the appearance of a much larger one due to the mirrors.

Almost out of sight in the ceiling is the Drayer-Hanson unit with coil and fan. Opening and closing the refrigerator doors have little or no effect on the constant temperature maintained inside, the florists report. Temperature is kept at a 42-45° F., never more than 50° F., they report.

Philip F. Hourt, of Fedders-Quigan, Dies

BUFFALO—Philip F. Hourt, 46, assistant production manager of the Fedders-Quigan Corp., died Aug. 3 of a heart attack. He had suffered from a heart ailment for five years.

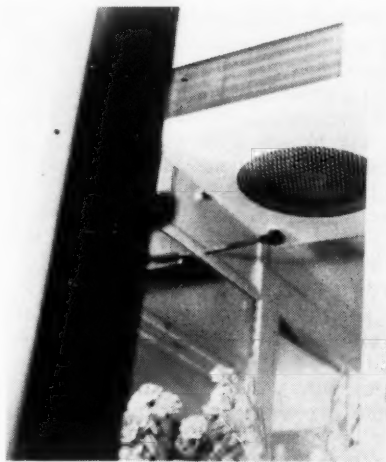
Hourt joined Fedders-Quigan 30 years ago when it was the Fedders Mfg. Co. His wife, two sons, and his father survive.

Super-Cold of New York Opens New Branch In Philadelphia

LONG ISLAND, N. Y.—The third office of the Super-Cold New York Co., Inc. was recently opened in Philadelphia with Richard E. Rudolph as manager.

Formerly the Ark Co. of Philadelphia, the new sub-branch will be located at 846 N. Broad St.

The Super-Cold New York Co., a branch of Super-Cold Corp., Los Angeles, currently has offices in Newark, N. J. and New Haven, Conn. J. S. Lipack, vice president, indicated that another office would be opened soon in Albany, N. Y.



This view of the Raze Floral Shop's custom-built walk-in looks through one of the windows. Note how close to the ceiling unit cooler the flowers are placed.

RSES-REMA Boston Program Outlined

BOSTON—A tentative program schedule for the three-day Eastern Educational Conference to be held in the Bradford hotel here Oct. 8-10 has been laid down by the conference committee composed of members of the Refrigeration Service Engineers Society and the Refrigeration Equipment Manufacturers Association.

The conference program follows:

Friday, Oct. 8

2 to 10 p.m.—Exhibits open.
7 to 9:30 p.m.—Educational briefs.

Saturday, Oct. 9

9:30 to 10:30 a.m.—Round table forum.

10:30 a.m.—Speaker.
11:30 a.m.—Speaker.
Noon to 10 p.m.—Exhibits open.
2 to 5:30 p.m.—Educational briefs.
7 to 9:30 p.m.—Educational briefs.

Sunday, Oct. 10

9:30 to 10:30 a.m.—Round table forum.

10 a.m. to 1:30 p.m.—Educational briefs.

10 a.m. to 3 p.m.—Exhibits open.
3 to 6 p.m.—Banquet.

Wyoming Engineer Runs Drive-In Dairy In His Spare Time

CASPER, Wyo.—Earl Guthrie, refrigerating engineer at the Standard Oil Co. here, is making his refrigeration knowledge pay extra dividends through operation of a drive-in ice cream shop which he has equipped with machinery to freeze all of his own ice cream and store it.

Guthrie's son, Bill, is a partner in the new enterprise known as the Supreme Ice Cream Shop which will serve as a sideline for Guthrie.

Special frozen concoctions are being promoted by the ice cream shop. One is a drink called a "Coolie" and is a malt made with sherbet and milk rather than ice cream and milk. Another is the "Dixie Delight," a long cool drink composed of sherbet floating in orange, lemon, or lime soda.

By making all his own ice cream, Guthrie says that he can draw trade by featuring a variety in flavors.

Air Control of N. J. Adjudged Insolvent

NEWARK, N. J.—Air Control of New Jersey, Inc., 1172 Raymond Blvd., Newark, was adjudged insolvent Aug. 2 in a creditor's suit alleging its financial inability to complete air conditioning work at the Bellevue Theater, Upper Montclair; New Theater, Elizabeth; Linden Plaza and Lakewood Theater.

Vice Chancellor Henry T. Kays appointed Nathan Ravin receiver.

The suit was filed by Bergman & Rothbard of Melchior, Armstrong, Dessau Co., Inc., refrigeration supply house, holder of a \$2,800 judgment against Air Control.

The complainant said the concern had failed to pay various contractors on the theater jobs, owed employees wages, taxes and other priority claims, with the result that liens were being obtained against the company's assets.

The court directed that Ravin post a \$5,000 surety bond and call for presentation of all claims by Sept. 2.

FRIGIDAIRE "YL" SWITCHES for ACCURATE, DEPENDABLE CONTROL

A TYPE AND SIZE FOR EVERY COMMERCIAL REFRIGERATION JOB

Choice of Low-Pressure or Thermostatic Control, With or Without High Pressure Cut-Out

Frigidaire "YL" Switches are the choice of refrigeration servicemen everywhere. For they are readily adaptable to almost any job, are easily installed and easily adjusted. Their dependable performance assures lasting customer satisfaction.

These versatile switches are built ruggedly and simply for heavy-duty service. Setting changes are virtually eliminated. Yet these switches are fast-acting and fully automatic. Increased current handling capacity—the result of a unique operating mechanism—has earned high electrical ratings with Underwriters' Laboratories.

Take advantage of Frigidaire's long experience in refrigeration—use Frigidaire precision-built "YL" Switches on every job.

FRIGIDAIRE "YL" SWITCHES OFFER ALL THESE ADVANCED FEATURES

- Each model covers a wide temperature range and can be used with Freon-12, sulphur dioxide or methyl chloride.
- Can be mounted in any position.
- Applicable to single phase, polyphase and D. C. motors.
- Accurate factory calibration.
- Contacts are fully enclosed.
- Tightly-fitting plastic cover is dust and vermin proof.
- Motor over-load protection optional on all models.



FREE Frigidaire Parts Catalog

Frigidaire service parts, now in plentiful supply, are available to all refrigeration servicemen. For your free Frigidaire Parts Catalog, write to Frigidaire Division, General Motors Corporation, 1295 Amelia Street, Dayton 1, Ohio.

MAIL THIS COUPON TODAY

FRIGIDAIRE DIVISION, GENERAL MOTORS CORPORATION
1295 Amelia Street, Dayton 1, Ohio

Please send my free copy of your new parts catalog—"Genuine Precision-Built Frigidaire Parts and Accessories."

Name _____
Firm Name _____
Address _____
City _____ State _____

insist on genuine

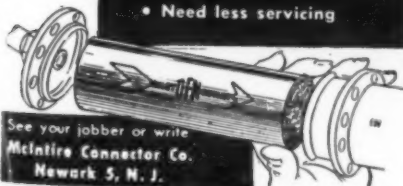
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MARLO-HEAT TRANSFER
Since 1925

GREATER CAPACITY **DFN** DEHYDRATORS

- Stay on the line longer
- Need less servicing



See your jobber or write
McIntire Connector Co.
Newark 5, N. J.



You're twice as sure with two great names

FRIGIDAIRE

MADE ONLY BY
GENERAL MOTORS

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

future—if our Individualistic Free Enterprise System is maintained and upheld by the efforts of Rugged Patriots—is not only hinted, but pictured.

What a film! And how wonderful it is that a supposedly "soulless corporation" has spent thousands of its profit-dollars on producing it.

Prediction: This expenditure will pay large dividends—not only to Nash-Kelvinator, but to all business enterprises and to the United States of America.

To make this film absolutely authentic, 10 cameramen traveled a total of 18,000 miles over 20 states while visiting the actual American shrines shown.

Views of Boston's Old North Church, the Salem Witch House, the first textile mill in America at Pawtucket, R. I., and many other inspiring patriotic scenes were photographed on the spot.

One cabinet-maker sequence features the actual square-cut nails taken from a 75 year-old house near Biddeford Pool, Me.

Another scene, illustrating the opportunities for progress under the American free enterprise system, shows an early inventor working on a small model of a sulky plow. The miniature in that scene actually is the original inventor's model of the first sulky plow.

"Of This We Are Proud" is a 16-mm film with a running time of about 22 minutes, produced in Hollywood, Calif., by the Raphael Wolff Studios.

This significant film will be available from Kelvinator headquarters in Detroit on a free loan basis to anyone who will show it. The only charge will be for transportation.

Prints will also be sold to Kelvinator distributors who can make it available on the same basis in their territories.

Anybody who believes sincerely that the American Way of Life offers the most benefits to the most people will be proud and happy to exhibit this remarkable film wherever and whenever he can arrange to do so.

And anybody who is concerned about the effect of Communist and Socialistic propaganda—to which his own children are subjected in their own schools—should welcome the opportunity to show this magnificent film to students in his area.

Hats off to Nash-Kelvinator! It's a corporation which recognizes its obligation to The American System.

Twentieth-Century Aesop

Communist-despising Union Labor leaders (according to one of our friends in the UAW-CIO) are telling this story to conclaves of their sometimes too-impressionable left-wing fellow members:

An American labor delegation visited the Skoda works in Czechoslovakia.

The Americans asked: "To whom does this factory belong?"

"We, the people own it," said the guides.

"Who owns the machinery?" asked the Americans.

"We, the people own it," the guides answered.

"Who gets the profits?" asked the Americans.

"We, the people get them," was the reply.

Later on, one American delegate saw three large cars parked nearby, and asked the Czechoslovakian labor chief who owned these luxury-type automobiles.

"One is owned by the Commissar of Defense, the second belongs to the Chairman of the Workers' Committee, and the third to an inspector from Stalingrad, who is visiting here," this Iron Curtain Union Leader informed the quizzers.

Several months later a Skoda union labor delegation arrived in America to tour industrial plants. An American UAW-CIO bigwig conducted these Czechs on a tour of the Ford layout on the River Rouge.

"Who owns all this?" the visitors asked.

"Mr. Ford does," said the American.

"Who gets the profits?" the Skoda men continued.

"The Ford family and the Bureau of Internal Revenue," answered the UAW-CIO guide.

Shortly afterward the Leader of this Czechoslovakian Labor argosy noticed at least 30,000 automobiles parked in a nearby Ford-factory parking lot. In utter amazement at that sight, he asked: "Who owns all those automobiles?"

The American grinned. Then he said:

"We, the people, own those cars."

Argument for Rearmament

Our glorious nation hasn't lost a war yet. But it *could* lose the next one. Being unprepared and unwarlike ourselves, in times of peace we don't prepare for war—as George Washington begged us to do in his notable Farewell Address.

It's in our Nature to breed and heed Pacifists. That's why, ever since we became a mighty nation, we haven't kept our powder dry. Wars in which we are involved always catch us by surprise, and with our pants down, in their early stages. This was true even in Mark Twain's time.

"Why should we appropriate more money for battleships?" a professional Pacifist demanded of Mark Twain at a cocktail party. "We aren't mad at anybody and we don't seek additional territory. Why should we waste money preparing for war?"

"Your question reminds me of two big, mean-looking dogs that met one day down in Missouri," rejoined the great humorist. "They regarded each other in the most ferocious manner, each carefully sizing the other up, but neither daring to fight. Then one of them made the mistake of opening his mouth, showing that he had no teeth. And when he did that the other dog whipped the devil out of him."

There's a parallel today. . . .

Believe It or Not—

(The following is reprinted from "Instructions to Employees" issued by Carson Pirie Scott & Co., a Chicago department store, 80 years ago.)

"Store must be open, 6 a.m. to 9 p.m., the year round. Store must be swept; counters, base shelves and showcases dusted. Lamps trimmed, filled and chimneys cleaned; pens made; doors and windows opened; a pail of water, also a bucket of coal, brought in before breakfast (if there is time to do so), and attend to customers who call.

"Store must not be opened on the Sabbath unless necessary, and then only for a few minutes.

"The employee who is in the habit of smoking Spanish cigars, being shaved at the barber's, going to dances and other places of amusement will surely give his employer reason to be suspicious of his integrity and honesty.

"Each employee must not pay less than \$5 a year to the church and must attend Sunday School regularly.

"Men employees are given one evening a week for courting and two if they go to prayer meeting.

"After 14 hours of work in the store, the leisure hours of employees should be spent mostly in reading."

How times have changed!

Quotable Quote

"Keep on going and the chances are that you will stumble on something, perhaps when you are least expecting it. I have never heard of anyone stumbling on something sitting down."—Chas. F. Kettering.

Stop and Think

"Big Jim" Lincoln, the proprietor of a prosperous profit-sharing Ohio manufacturing enterprise, contributes the following short essay on Collective Bargaining to our continuing study of economic dilemmas:

"Collective bargaining as now practiced is a failure. The promises made by its sponsors are completely untrue. It is the way to economic war and revolution rather than to labor peace and prosperity as promised.

"The fundamental difficulty with collective bargaining as now practiced stems from the fact that the person who pays all wages, all profits, all dividends, and all taxes, and who therefore has most at stake, is not represented. He is the consumer.

"Unfortunately, in industry the interests of both labor and management are often mistakenly thought to be different from the best interests of the consumer. Management primarily wants continuous operation of the plant and will therefore give labor any amount of wages with any agreed output limitation, if necessary, to keep the factory in operation.

"Management does not like the resulting higher costs, but likes a shutdown even less. Such added costs are paid by the consumer only; why should men or management worry? Therefore, to give labor and management the power to set wages

which the consumer must pay is completely dishonest and must fail.

"Since the consumer has now no chance to bargain in his own interest, is it any wonder that we have kiting wages, reduced efficiency, and the resulting inflation that we are now seeing?"

"There is a way out of this. Deal with reality. Put on one side of the table both labor and management, because their interests are identical. Put on the other side of the table the consumer. Real collective bargaining will then take place. The war between labor and management will disappear automatically. They will then see the truth. They are the hired men and must work together economically for their real boss, the consumer.

"In carrying out this plan the consumer's representatives can be chosen from such groups as the grange, the church, and the parent-teachers' associations. Those chosen would represent all consumers. They would constitute the bargaining agent for the consumer.

"Furthermore, the consumer can make his decision stick either by the strong-arm methods that unions have taught us, or, better he can withhold from the recalcitrants the things they must have. If a striking union stops delivering coal or steel the consumer will stop delivering food and other essential services.

"When such collective bargaining takes place, not only will industrial peace be secure but also the present spiraling inflation will disappear. Labor-management war will be discarded for enthusiastic and economic service to the consumer which will result in increased efficiency and lower prices."

ESKOTRAY

The Modern Plastic Ice Cube Tray

FOR QUICK EASY ICE CUBES

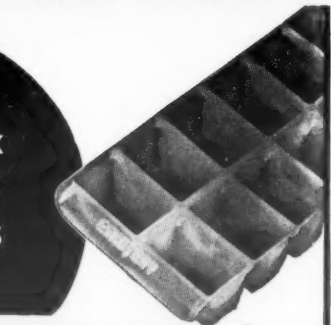


DEALERS!

THE ICE CUBE CONVENIENCE EVERY HOUSEHOLD IS DEMANDING. Profit today and every day by pushing this quick release ice cube tray. GUARANTEED . . . NATIONALLY ADVERTISED . . . Attractively sealed in cellophane . . . ESKOTRAY profits are quick and good.

ESKOTRAY

FOR QUICK EASY ICE CUBES



SERVICEMEN!

ADD \$\$\$ PROFIT TO EVERY SERVICE CALL! No sharp instruments, no tugging, no pulling necessary . . . non-sticking ESKOTRAYS add life to refrigerator freezing compartments.

ESKOTRAY

FOR QUICK EASY ICE CUBES



MANUFACTURERS!

Your customers are entitled to the convenience of ESKOTRAY and you are entitled to the economy of ESKOTRAY.

AVAILABLE THROUGH YOUR JOBBER

ASSOCIATED PLASTIC COMPANIES, INC.
The Merchandise Mart Chicago 54, Illinois
In Canada—Ontario Steel Products Co., Ltd.
Chatham, Ontario

WOLVERINE TRUFIN BENDS EASILY

Wolverine Trufin can be bent as easily as plain tube—to very small radii—without any danger of collapsing the tube. The advantages of this feature are self-evident. But that is only one of the many benefits to be derived from the use of TRUFIN.

This unusual integral finned tube provides so much increased surface area that equal efficiency can now be obtained in a space just a fraction of that required when plain tube was used.

If you have heat transfer problems—if compactness and exceptionally high efficiency are of interest to you—if resistance to vibration is an important factor—you should learn about Wolverine Trufin. Trufin is available in many sizes, alloys and fin spacings.

Send for Bulletin A-8 showing charts and giving other technical information regarding the use of finned tube.

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MANUFACTURERS OF SEAMLESS NON-FERROUS TUBING

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Air Cooling Industry May Have 30% Greater Volume During 1948

NEW YORK CITY—A record business volume of \$235,000,000 has been predicted for the air conditioning industry this year, says the *New York Times*.

Back orders for equipment and installation contracts indicate that the year's total volume will exceed record-breaking 1947 by at least 30%, the paper said. It noted that equipment sales and installation contracts hit an all time peak in May and June.

Indicative of the growth of the industry are figures on the dollar value of equipment produced. The paper said that the total value of condensing units, compressors, centrifugal refrigeration machines, and self-contained air conditioning units produced in 1944 was \$33,927,000; in 1945, it was \$60,503,000; in 1946, \$94,919,000; and in 1947, \$167,598,000.

Self-contained unit production alone, according to the report, shows even more startling gains. In 1944, its volume was \$3,686,000. By 1947, it had risen to \$34,995,000.

York Corp. was quoted as foreseeing a potential market for 150,000 room coolers in the next four or five years. Carrier Corp. surveys, the paper said, show that business in air conditioned stores increases about 20 to 35% on a year-round basis.

Harvester Takes Stelco Bid for Cooling Job at \$1 Million Parts Depot

ST. PAUL—Stelco, Inc., has been awarded the contract for air conditioning installations in a new \$1,000,000 six-acre wholesale distributing service parts depot for International Harvester Co. to be constructed in St. Paul Midway district, third of Harvester's new network of 11 depots which will be installed throughout the nation.

The new parts depot will serve as wholesale parts distribution center for company-owned branches and retail dealers in Minnesota, the Dakotas, western Wisconsin, and northern Iowa, with even larger area to be served in future.

This expansion in distribution facilities is being made to offer faster and more complete service to customers using refrigeration, motor trucks, farm, and industrial power equipment.

The new depot will have an area of about 250,000 sq. ft. and will be the fourth I-H operation in the Twin Cities. The company will continue to operate its general line branch and transfer house in the present Harvester building in St. Paul, and its motor truck branch in Minneapolis.

It will employ more than 300 persons when in full operation, sometime after occupancy about May 1, 1949. D. F. Kuntz, H. E. Sanders, and F. E. Wilson, Twin Cities managers of the firm's various operations, announced.

The new building will contain 15,000 sq. ft. of office space with masonry construction. Building was engineered and designed by I-H construction department assisted by R. Loewy Associates, industrial designers.

An unusual feature of the building will be installation of a mechanical conveyor system which will facilitate and speed up handling of a large volume of parts.

Baggese Refrigeration Co. To Sell C. V. Hill Line In Dallas

DALLAS, Tex.—Baggese Refrigeration Co., which recently occupied new quarters at 2024 Jackson St. in downtown Dallas, has been appointed a distributor for C. V. Hill & Co., Inc. of Trenton, N. J.

Baggese's new home contains 7,500 sq. ft. of floor space. The main display measures 50 by 60 ft. and a separate display room for rebuilt fixtures 50 by 40 ft. Taking up the remainder of the area is a shop, a parts room, and a 12 by 16-ft. paint room. The property includes a large parking lot.

Operated by Joseph A. Baggese, the firm has been handling commercial fixtures for the past 14 years.

John H. Bartol Joins Connor In Key Post

NEW YORK CITY—John H. Bartol, formerly passenger sales supervisor, American Air Lines, has joined the staff of the W. B. Connor Engineering Corp., manufacturer of Dorex air purification equipment and Kno-Draft adjustable air diffusers.



John H. Bartol

Bartol will be the director of the Air Recovery Division of the corporation.

Conditioning, Hollywood Style

NEW YORK CITY—The 12-story Metro Goldwyn Mayer office building at 1540 Broadway here has recently been air conditioned.

The installation consists of 54 Chrysler Airtemp "packaged" units with individual controls.

Series of Gemco Meetings On Sales, Production Set For 10 Cities This Fall

ST. LOUIS—Production and sales plans of General Engineering & Mfg. Co. for the coming year will be discussed with the entire distributor organization during a series of 10 regional sales meetings this fall, Gemco announced.

The series will be started Sept. 13 with a two-day session here. Following this session, the same two-day program will be carried out in Chicago, Cleveland, New York City, Atlanta, Miami, as well as New Orleans, Dallas, Kansas City, and Los Angeles.

Leading the sessions will be three executives from the Gemco factory, F. H. Eldredge, advertising and sales promotion manager; R. D. Elgin, assistant to the general sales manager; and James Lamb, general service manager. Regional sales managers in whose areas the meetings are held will assist the Gemco executives.

Death Takes Morrill Dunn, Vice President, Director of McCord

DETROIT—Morrill Dunn, vice president and a director of McCord Corp., died Aug. 6 of a heart attack while sailing near Deborats, Ont., Can.

One of the men who founded McCord Corp., Dunn had been head of the refrigeration products division of McCord, which manufactures coils and condensers for the refrigeration field, from the time the division was set up until 1939.

While he had not taken an active role in the refrigeration division's activities since that time, he continued to be a well-known figure at industry meetings and gatherings. He was one of the industry executives who were instrumental in establishing the Refrigeration Equipment Manufacturers Association.

Dunn's hobby was sailing, and he was one of the best known sailors on the Great Lakes, and was a member of a crew that established

the Chicago-Mackinac sailing race record more than 35 years ago.

He served in World War I as a major in the air forces, and was made a Chevalier of the French Legion of Honor for his service with the AEF.

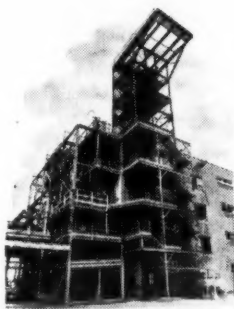
Contracting Firm Incorporated At \$50,000 Under New York Law

ALBANY, N. Y.—Gray & Russell, plumbing, heating, and air conditioning contractors, has incorporated its business under the same name to facilitate expansion. The corporation is authorized to issue \$50,000 in stock. Incorporators are S. Gardiner Russell, Walter H. Keenholts, and Miss S. H. Frasier.

Mfr's. Tax Rise Near \$2 Million On Cooling Equipment

WASHINGTON, D. C.—Manufacturers' excise taxes on refrigerators, air conditioners, and the like in June totaled \$5,333,000, compared with \$3,444,953 in June last year, the Bureau of Internal Revenue reported.

NOW—PLENTY OF "FREON"



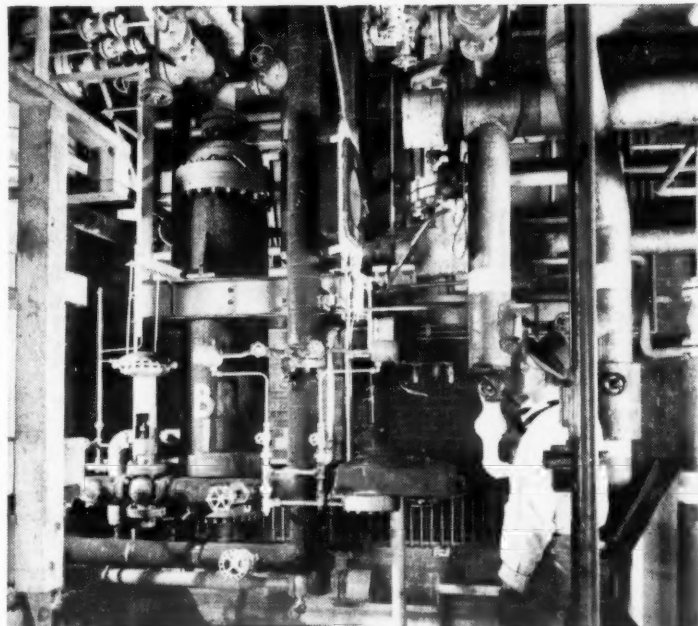
The new Kinetic plant at East Chicago, Indiana, increases production of "Freon" safe refrigerants and propellents by approximately sixty per cent. As a result, there is now plenty of "Freon" for every purpose. No longer is there a

reason for individual stock piling.

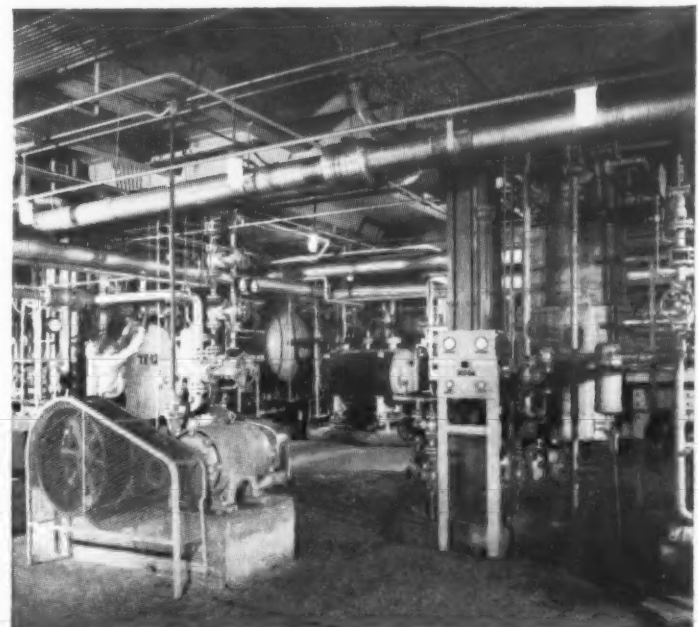
Need for greater production stemmed from the steadily growing demand for these superior refrigerants. Today, they are used by all the prominent manufacturers of air conditioning and refrigerating equipment. These manufacturers realize the uniform purity and quality of "Freon" is a factor in prolonging the life and service of their equipment.

"Freon" refrigerants are dry . . . almost totally anhydrous. There are less than ten parts of moisture in a million parts of "Freon". . . less than half a gram of moisture in a 145-lb. cylinder! This dryness eliminates risk of freezing tiny capillary tubes in refrigerating units. It insures the proper operation of the compact, space-saving equipment made possible and practical through the use of these refrigerants.

"Freon" refrigerants are also non-toxic, non-flammable, non-explosive . . . and are ideal for every type of household, commercial or industrial application. When the occasion arises . . . protect your investment by being sure that the air conditioning or refrigerating equipment you install is designed to utilize "Freon" safe refrigerants. Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington 98, Del.



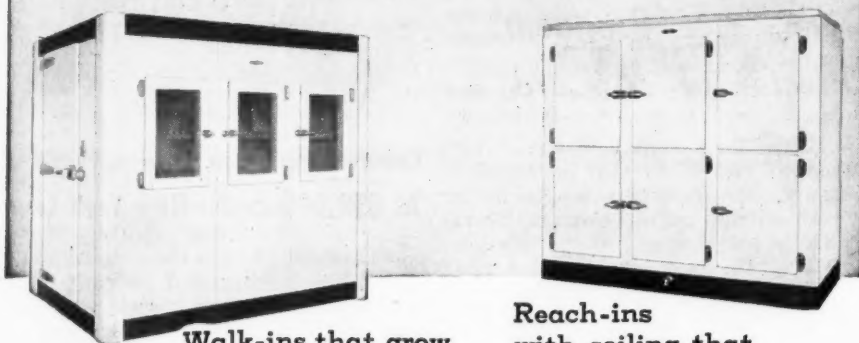
● Maze of pipes, valves, gauges typify equipment required in the intricate manufacture of "Freon."



● General view of one of the floors in the new Kinetic Chemicals plant at East Chicago, Indiana.



SOME TERRITORY NOW AVAILABLE



Walk-ins that grow with the merchant's business

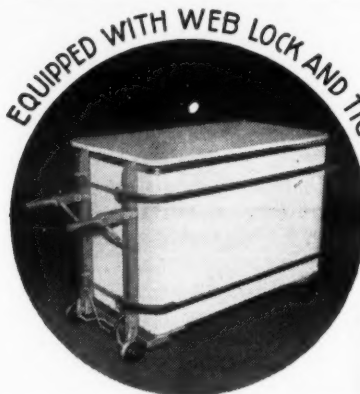
Reach-ins with coiling that is different



A Dry Beverage cooler with quicker cooling



THE C. SCHMIDT CO.
CINCINNATI FOURTEEN OHIO



Are You Looking for An Easy Way to Handle Stoves, Refrigerators and Freezers?

Solve Your Problem with the New **ROLL-OR-KARI Dual Trucks**

Patented Step-On-Lift • Folding Handles
Capacity 1000 Lbs. • Shipping Weight 40 Lbs.
WRITE TODAY

THE ROLL-OR-KARI CO.
MANUFACTURERS
ZUMBROTA • MINNESOTA

Survey Reveals Meter Plan of Payments Grows In Commercial Refrigeration Sales

CHICAGO—Commercial refrigeration dealers across the country are again giving consideration to the meter plan as a means of stimulating sales, according to a recent dealer survey made by the International Register Co. here.

The meter plan was in use before the war for sales of household and commercial refrigeration. Essentially an easy-payment plan, the customer deposits a stipulated number of quarters into a "meter" every day, thus accumulating his monthly payments.

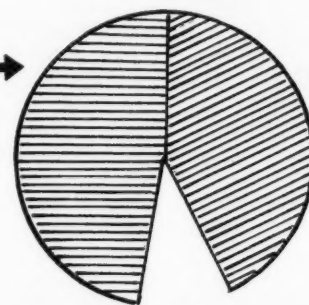
The meter is installed in the power line ahead of the compressor motor, so that if the customer fails to make his deposits, the current is shut off. 888 dealers filled in the questionnaire that was mailed to the industry. Those replying were a representative cross section of all dealers in terms of size and location, says International Register Co.

Few dealers used the meter plan in 1947 due to the shortage of equipment and the prevalence of ready cash. But out of all the dealers who replied, 60% said they definitely would use the meter plan in 1948, and 30% said they might use it.

Apparently the 436 dealers who had used the meter plan before had good results with it. Out of this group 323 (or 74%) stated they would use the meter plan again.

Of the dealers who had never used the meter plan before 406 (or 90%)

211 OR 47% WILL DEFINITELY USE THE METER PLAN IN 1948



AN ADDITIONAL 195 OR 43% MAY USE THE METER PLAN IN 1948

The above chart shows that of the dealers responding to a survey made by International Register Co., nearly half indicated that they would use the meter plan in commercial refrigeration sales work this year.

indicated they were considering use of the meter plan in 1948.

10% of the dealers stated they would probably not use the meter plan, and their reasons were based on their belief that there was still a large "cash" market in their territory.

75% of those using meters stated that it definitely helped increase their sales volume. One dealer had this to report, "So far in 1948 it (the meter plan) has increased our sales about 20%."

As an example of what can be done with an aggressive campaign, the reports showed the following meter plan sales in 1947:

9 dealers sold 100-299 units
2 dealers sold 300-500 units
3 dealers sold \$10,000-\$80,000
1 dealer sold over \$200,000

These sales were over and above their sales for cash and on regular time payment terms.

The methods employed to collect from the meters varied from dealer to dealer. Most of them relied on salesmen to collect and take advantage of that call to sell the customer additional equipment. The following table shows the varying methods used:

Who Collected from Meters	Dealers Reporting	
	No.	%
Company Salesman	75	49%
Special company collector	31	20%
Outside Agency	27	18%
Servicemen	5	3%
Other	16	10%
Total	154	100%

Regarding collection, one dealer stated, "Daily payments for refrigeration equipment were as easy to

pay as were daily bread and milk bills that the merchant, particularly the small merchant, paid on delivery."

By far the largest percentage of dealers reported that they were collecting from meters once a month, as shown in the following table:

Once a month	119	77%
Twice a month	15	10%
Other	20	13%
Total Reporting	154	100%

A California bank reported that its "experience has shown that under the meter plan, delinquencies and collection efforts are maintained at a minimum and, in effect, the machine pays for itself through the daily deposits."

Late in 1947, dealers began to notice that outright cash purchases were becoming less in number. Not only that, merchants were shopping for "good deals." They wanted quality refrigeration at a low down payment and low monthly instalments. Now this trend is expanding and growing stronger.

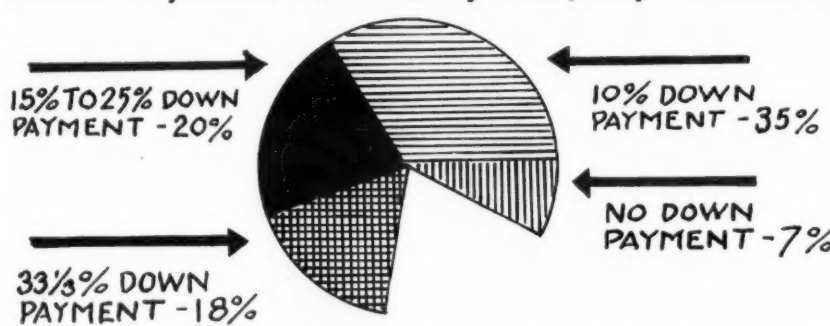
The following shows the down payments required by dealers selling on the meter plan in 1947:

Down Payment Required	Dealers	
	No.	%
None	10	7%
10%	53	34%
15% to 25 %.....	32	21%
33 1/3 %	27	17%
Varied with Customers.	32	21%
Total Reporting	154	100%

The meter plan can easily be adapted to any refrigeration sales campaign. It is merely added as another payment plan. Easily under-

(Concluded on next page)

Down Payments Favored by Majority of Dealers



While many people believe that the meter plan is built around a "no down payment" sales plan, the big majority of dealers who have used it since the War have asked down payments.

DON'T OVERLOOK THIS FACT!

SPORLAN PRODUCTS
are BETTER
for both
Air Conditioning and
Commercial Refrigeration
Installations

and **HERE** is **WHY!**

Only **SPORLAN** Thermostatic Expansion Valves can give you Peak Performance on all installations, because only Sporlan offers you **SELECTIVE CHARGES**. Each charge is designed to fit a definite condition.

You'll Get Peak Performance on every installation you make with Sporlan Distributors. The perfectly designed nozzle and conical button assure even distribution regardless of number of outlets.

Only **SPORLAN** Solenoid Valves will give you Peak Performance on all installations too, because the Sporlan Solenoid Coil is so well insulated...so moisture proof, that it defies electrical failure.

Only **SPORLAN** Catch-Alls can give you Peak Performance on all installations, for only the Catch-All has a porous molded cylinder. It cannot powder! It dries the refrigerant to an extremely low end point. A point so low that any remaining moisture is absolutely harmless.

Only **SPORLAN** offers you the Solenoid Pilot Control, a patented control that gives Peak Performance on every installation where large solenoid valves are ordinarily used. Cost less than large solenoid valves to buy...only one size and type to stock...cost less than large solenoid valves to install.

SPORLAN Strainers are Peak Performers too, because they are designed better...precision built to closer tolerances, and contain the best materials obtainable.

Place your next order with your Sporlan Wholesaler and get Sporlan throughout. You'll see why Engineers everywhere recommend **PEAK PERFORMANCE** **SPORLAN PRODUCTS!**

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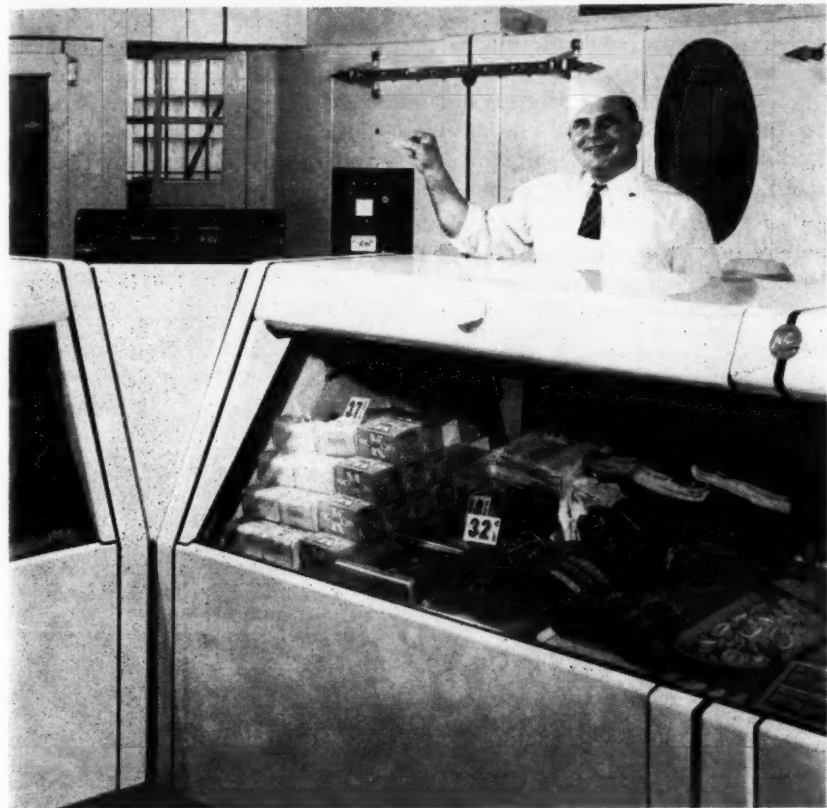
An Old Favorite Back Again! OLYMPIAN BOTTLE COOLERS by Perlick for IMMEDIATE DELIVERY

Perlick "Olympian" Bottle Coolers, in standard baked black or the new all stainless steel are now available for prompt shipment in 4 popular sizes. Now vastly improved for maximum bottle cooling performance. Write for Bulletin No. 56.

Also Ice Refrigerated Models

PERLICK BRASS CO.
3110 W. MONROE AVE.
MILWAUKEE 10, WIS.

'Coin In the Meter' Pays for New Equipment Graybar Will Handle U. S. Rubber's Panels For Home Heating



With the meter plan of payments, a buyer of commercial refrigeration equipment makes his payments by putting a certain amount of silver coinage into a meter usually each day. Most coin meter devices are generally so arranged that failure to deposit the required amount means that the refrigeration system won't operate.

Predict Increase In Coin Meter Use--

(Concluded from preceding page) stood, the plan does not require extensive training of salesmen. Emphasis is placed on little or no down payment and small daily deposits in a meter, as simple conveniences for the customer.

Although the meter plan is particularly successful in reaching low-income customers, it must not be assumed that firm credit control is unnecessary. The meter constantly reminds the customer to make his daily payment but it doesn't make his credit any better.

An interesting side-light on the meter plan is the large number of instances where customers insist on buying the meter from the dealer after completing the refrigeration payments. They have become so accustomed to this "automatic budgeting" that they will use the meter to save money to buy a car, fur coat for the wife, or additional equipment for the store.

Meters equipped with the delinquent payment feature are by far the most commonly used for commercial refrigeration today. Not only do these meters stop the electric current from reaching the refrigerator motor when a time period has elapsed, but they require the customer to pay up all delinquent payments until he is paid up to date, before the refrigerator will again function.

Payments range from \$1 to \$6 a day, with a quarter being the unit of payment.

Cutler-Hammer Co. Buys West Electric Products

MILWAUKEE — Cutler-Hammer, Inc., here has acquired the business of the West Electric Products Co., 1795 Pasadena Ave., Los Angeles.

W. G. Tapping, Cutler-Hammer district sales manager, will be in charge of the new plant. Sale of the firm's products in the Los Angeles area will continue to be handled by the company's sales office in Los Angeles.

The new plant will be integrated with other Cutler-Hammer plants in the manufacture of motor controls, panelboards, etc.

Aero-Coupling Corp. Is Set Up In California

BURBANK, Calif.—Aero-Coupling Corp. here, is now operating under license issued by Aeroquip Corp. of Jackson, Mich., the companies have announced.

Soaring Meat Prices Step Up Activity In Locker Plants

WASHINGTON, D. C.—Refrigerated locker plant operators are benefiting from soaring meat prices, according to reports reaching Department of Agriculture officials.

The operators buy livestock from nearby producers, have them butchered into meal-size portions, freeze and store them for their patrons or home freezer owners. Some operators are complaining, however, that they are being squeezed between locker rental and processing charges which haven't gone up much, and higher operating costs.

A Department of Agriculture survey now being completed will show 10,000 locker plants in operation now, an increase of 500 from a year ago and 4,000 more than at the end of the War.

Survey Shows Use of Ice Declined In '47

WASHINGTON, D. C.—Sales of ice in the United States during 1947 declined 2.81% from the 1946 level, according to a survey just completed by the National Association of Ice Industries.

A total of 52,964,621 tons were sold last year as compared to 54,436,519 tons in 1946. It was the first time in seven years that sales were not higher than those of the preceding year.

The survey revealed a substantial increase, percentage-wise, in processed ice sales by those companies keeping separate records on such sales, and a greater increase in sales of sized ice than in those of ice cubes and crushed ice. Sales of sized ice were up 35.4%, those of crushed ice 18.3%, and those of cubed ice 8.4%.

The survey also disclosed that:

1. The industry's operating load factor in 1947 was 55.9%, a decline of 0.4% over the 1946 figure of 56.3%.
2. Natural ice sales of commercial ice companies totaled 1,516,202 tons, an increase of 1.89% over those in 1946.

NEW PRODUCTS WANTED

Large, responsible manufacturer of refrigerated and commercial food service equipment, with complete sheet metal fabricating, machine, foundry and porcelain enamelling facilities, has additional capacity and raw materials for other products of merit. Also interested in new products on purchase or royalty basis. Will finance entire engineering, production, and marketing program for the right products.

BOX 2778

AIR CONDITIONING & REFRIGERATION NEWS

see your "DETROIT"

WHOLESALE

for
Expansion Valves
Solenoid Valves
Controls

"DETROIT"

2810

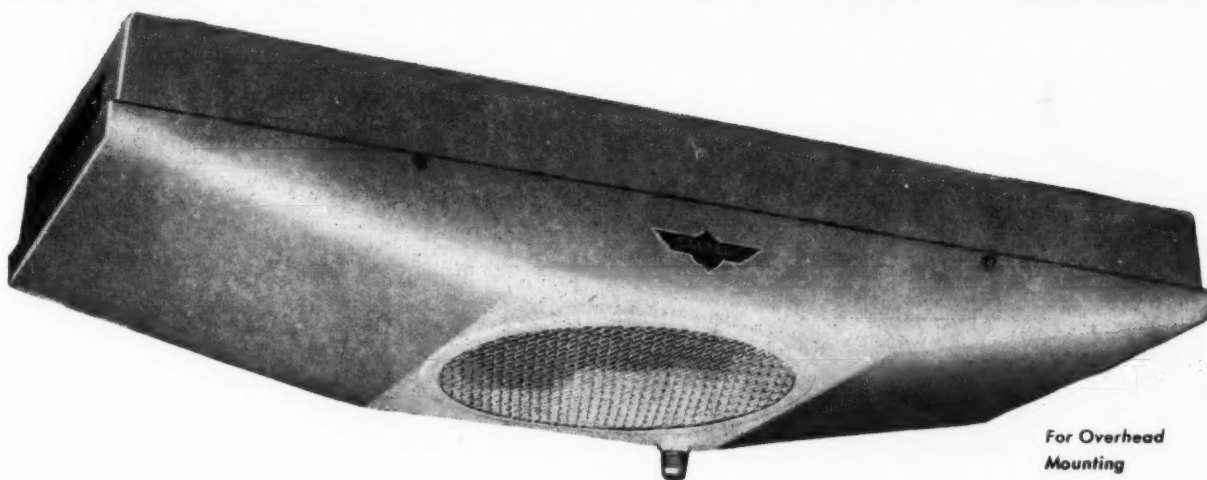
DETROIT LUBRICATOR COMPANY General Offices: 5900 TRUMBULL AVENUE
DETROIT 8, MICHIGAN

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Canadian Representatives: RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG

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EXPORT DEPARTMENT—Box 278, Ridgefield, New Jersey

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For REACH-IN REFRIGERATORS, BACK BARS, SMALL WALK-INS and other SMALL SPACE INSTALLATIONS • USE THE NEW LARKIN "LC"

Again Larkin leads the field in the development of a superbly engineered and precision built humi-temp unit for use in the many refrigerator installations requiring maximum efficiency in limited space.

Note these outstanding features built in every Larkin "LC":

- 1 Standard Larkin Aluminum case—for light weight installation and rust proof performance!
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- 5 Rubber grommets provided in rear of case for connection outlets as well as in top for vibration proof ceiling mounting!
- 6 Equipped with Larkin Patented all aluminum Cross Fins, each fin embracing every tube within the unit!

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Plate Coils, Heat Exchangers, Evaporative Condensers, and Direct Expansion Water Coolers.

See your jobber or write today for profusely illustrated catalog complete with all necessary technical and price data.

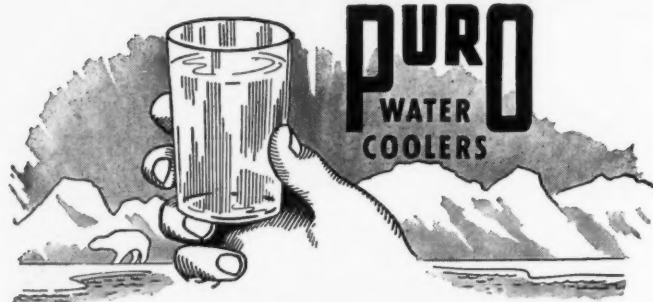


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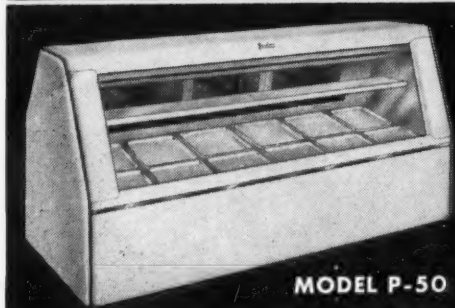


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WATER
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436-440 Lafayette Street, New York 3, N. Y.
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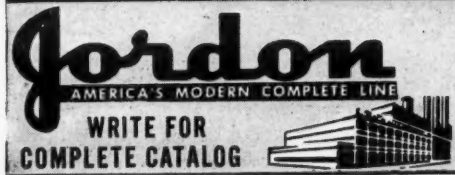
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NEW YORK CITY—Points to be considered in designing, selecting, and arranging sales fixtures were outlined in talks on displays and fixturing before a panel of the recent Store Modernization Show clinics.

Speakers included J. C. Montgomery, vice president of Columbus Show Case Co.; Jose Fernandez and Morris Ketchum, Jr., of the American Institute of Architects; and I. H. Bander, vice president of McKesson & Robbins, Inc.

1. Keep Fixture Heights Uniform Within Each Store Department

The role of display cases in focusing attention on the merchandise was also emphasized in the talk by Fernandez of the American Institute of Architects. He said there are two common failings in the housing and displaying of merchandise:

"1. The emphasis given show cases, counters, etc., where the design sometimes is too elaborate and where the merchandise does not stand out properly.

"2. The improper housing or displaying of the merchandise for its most efficient handling. Drawers, shelves, depths of cases, etc. must be of the proper sizes. Equipment should not be designed for its good looking appearance only, but it must also be practical.

"The new trend," he reported, "is to make all fixtures as flexible as possible, and a basic cabinet may be transformed into several combina-

tions, without the use of a carpenter. This is very sound in principle but it may be overdone. Spare parts cost money and besides a place must be found for their storage.

"All fixtures should be designed simply and streamlined, with no superfluous mouldings and cornices which not only would mar their appearance, but also would make cleaning much more difficult. Besides, doo-dads cost money. . . .

"The average present day designer wants to design fixtures as unobtrusively, efficiently, and inexpensively as he can. There are many materials that may be used, glass being at the head of the list.

Glass Is Big Aid To Design

"Today we have non-shatterable, non-scratchable, laminated, heat resistant glass, thanks to the glass industry. But I believe that these could be improved by producing them in minimum thickness, thus reducing weight and cost. Plastics are light in weight, but somehow their cost is too high at present and they lack abrasive resistance.

"I think that the perfect fixture is still to be designed by some future genius. But it will not come until manufacturers of goods decide to adopt some method of universal packaging where there will be a constant module or package for each type of merchandise."

Ketchum pointed out that before sales fixtures and displays can be finally organized, a great deal of background planning must be successively completed in order to create the right shopping environment for their use. Elaborating on this, he said:

Related Displays Sell

"Customer traffic lanes—stretching from the entrance door to the most remote sales department—should first of all be organized for related merchandise locations. Traffic should be successively routed past impulse, convenience, and demand sales divisions, and each sales division should be located in friendly relationship to its neighbors.

"Incoming and outgoing merchandise should have equally well-defined traffic lanes from off-the-floor stock reserves to sales floor fixtures and then back again to the non-selling areas behind the scenes. Neither stream of traffic should be allowed to disturb or block the other.

"Finally, the general atmosphere and character of the sales space should be defined by carefully organized lighting, air conditioning, backgrounds, and color schemes.

"Once these basic factors have been set, it becomes possible to undertake the final design or selection of equipment for the storage and display of the goods on sale.

Layout Mustn't Bore Patron

"A well-organized sales floor should be packed with the greatest possible amount of merchandise, attractively displayed for customer appraisal, but it should never look like a glorified warehouse. It is fatal to bore cus-

Editor's Note: The following material, taken from discussions at the Displays and Fixtures Clinic held in conjunction with the Store Modernization Show in New York, offers the opinions of authorities and the results of studies on fixture design and placement, and display techniques.

It offers material that should be useful to producers and sellers of display fixtures, and to dealers who want to create better displays on their own sales floor.

tomers with an endless display of repetitive merchandise, yet the merchandise must be there within easy reach of both customers and sales personnel.

"The answer is to use sales fixtures appropriate in form and function to the goods that they hold. Each sales department should be equipped for maximum sales production and minimum customer or clerical fatigue.

Fixtures Do Three Jobs

"Sales fixtures have three jobs to do: *First*, they must store merchandise; *second*, they must display all or part of that merchandise; *third*, they must protect their merchandise from dust, too much customer handling, accidental breakage, or spoilage.

"Not every sales fixture has to perform all three basic functions. A refrigerator case for cut flowers is one of the few fixtures that must actually store, display, and protect its contents at one time. . . .

"Many items of merchandise need little or nothing in the way of a sales fixture. Furniture, floor coverings, and household appliances are among those items that require only shelves or platforms. Garden tools, small radios, housewares, lamps, mirrors, and pictures can also be sold from simple open sales fixtures. . . .

Need for Functional Styling

"Since the character of the merchandise involved and requirements set by the human figure logically determine the design of each sales fixture, it follows that there is no need to struggle for uniform fixture heights throughout the sales floor. A 7-ft. height for all wall fixtures, for example, may result in deadly monotony and needless construction costs.

"Instead, better results can be obtained by allowing the natural requirements of each group of fixtures to set different heights from department to department. Not only will this result in a pleasing variation in pattern through the sales floor, but it will also lead to easier identification of each department. . . .

"Even though well-designed storage fixtures can serve as display units in themselves, special "spot" displays are a necessity. Feature displays of merchandise focus attention on a department and help to identify it from a distance. . . .

"Displays and display backgrounds have both functional and aesthetic value.

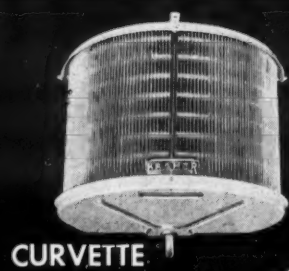
They Become 'Sign Posts'

"*First*, they act as sign posts on the indoor shopping street. A sales department can be easily identified by a glimpse of some dramatic focal display.

"*Second*, merchandise always appears more attractive and interesting when shown in realistic fashion. . . . A group of furniture pieces shown in a model room have far more sales appeal than row after row of bureaus or beds or sofas placed in regimental formation on the sales floor. Feature displays are a wonderful visual stimulus to impulse buying.

"*Finally*, displays liven up the sales floor. They can often be divorced from the particular sales departments they represent and placed at strategic points on traffic aisles, on stairways, near escalators and even, in placard form, within elevator cabs."

(See next page)



CURVETTE

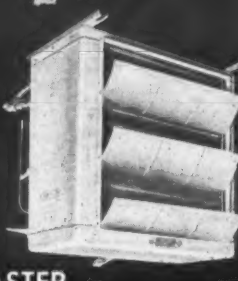


RADIAL

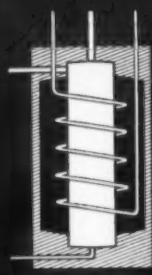
KRAMER Unit Coolers



MULLION PANEL



COOLMASTER

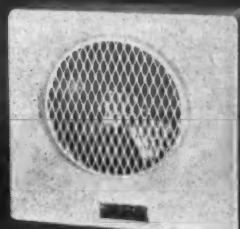


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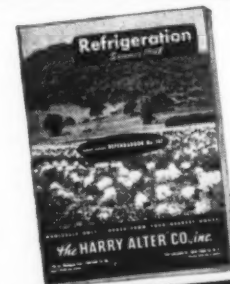
STUB PANEL



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THE HARRY ALTER CO.

WHOLESALE ONLY

2. Flexible Cases, Interchangeable Parts Will Lower Fixture Costs

Discussing four factors in lowering fixture cost, J. C. Montgomery said:

"Certainly the first step in any modernization program, regardless of size, is the selection of a proper person or firm to furnish the architectural service, to direct the planning, and coordinate the work of the various contractors and suppliers. . . .

"Frequently these services are offered the retailer free of charge as an advertising or promotional aid in the sale of products. Only too often such services are worth just about what they cost. . . .

"No retailer should attempt to be his own architect unless he is specifically trained for the job.

"Many of the larger stores have their own architectural departments. Even some of the smaller stores are finding it profitable to retain architectural and designing council on a retaining basis, for the program of modernization is a continuous one."

The second factor, he said, is the use of standard fixtures wherever possible.

"We do not say that all stores can be fitted completely with standard fixtures, but we do say that the use of manufacturers' standard fixtures with some various modifications or alterations can be made in the majority of the departments of stores without sacrificing the general theme of individuality or beauty. . . .

"The third factor in lowering fixture cost is obtained by building into

the fixtures the greatest possible degree of flexibility. It has been found that multiple purpose fixtures can be produced as economically as single purpose units.

"Fixtures should be made so that the interior assemblies, door assemblies, drawer assemblies, and as many other parts as possible are interchangeable in the easiest possible manner. Such features permit economical changes which will meet the requirements for special seasonal displays, the moving of departments, arranging the proper balance in locating impulse and plan purchase merchandise.

"The fourth factor in reducing cost is the recommendation that new designs be pre-tested. In the past we have been guided too much by what you as retailers and designers and we as manufacturers like. Too little did we think about what the customer would like and what would produce the greatest results.

"The term 'production' for so many years confined to usage in the factory, a few years ago became a common expression in the field of personal selling and now in the discussions on fixtures for retail stores, we hear the term 'productive capacity' used."

"The beauty of a fixture is not a guarantee that it will produce results. The capacity of the fixture to hold merchandise is not a guarantee that it will sell the maximum amount. . . ."

New Low Temperature Porcelain Enamel Use Is Subject at Forum

URBANA, Ill.—Newest development of the porcelain enameling industry, low temperature porcelain enamels which vastly increase the number of industrial and commercial products which can be "glass-coated," will be the subject of an address before the Tenth Annual Forum of the Porcelain Enamel Institute, to be held Oct. 13-15 at the University of Illinois, Urbana.

Maturing under the lower thermal critical of steel, these low temperature (1300° F.) porcelain enamels offer manufacturers of steel and other metal products an unprecedented opportunity to use these durable, inorganic finishes.

Low temperature porcelain enamels are already a standard finish for space heaters and have been successfully applied to certain range parts and to architectural panels. These new porcelain enamels are not designed, in most instances, to replace standard porcelain enamels. Rather, they will substantially widen the field of application for porcelain finishes.

"1300° F. Enamels, One and Two Coats," will be discussed by B. D. Bruce, Chicago Vitreous Enamel Product Co., during the Oct. 14 morning session of the P.E.I. Annual Forum. Bruce's talk will be part of a panel discussion on application of cover coats directly on steel.

The panel will also discuss 1500° F. enamels, including titanium enamels, and their application direct to titanium steels.

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3. 'Field Tests' Show How Units Can Be Adapted for Increasing Sales

"It's funny how some very little insignificant thing can be done to improve the efficiency of a fixture.

"We tested open display units in the drug field and it was found that a modified slant on the front of the lower section would more than double the selling efficiency of that part of the fixture. In the drug field it was found that an open display featuring lower priced merchandise placed on the top of a show case which featured somewhere the higher priced merchandise produced a tremendous increase in the sales of the higher priced merchandise. . . .

"In the retail bakery and bakery department of the supermarket it has been found that tilting the display of merchandise on the wall case shelves increases sales. Lowering the height of the floor cases, using them for display only, enhances the effectiveness of the wall case display and produces increased sales in the department. Using all low cases permits wrapping at all points and eliminates customer congestion at the single wrapping counter.

"In all instances mirrors should be used with discretion. They should not be used to reflect the customer's image unless it is proved conclusively that this will aid sales. . . .

"New type fixtures should be tested

for customer convenience. Shoppers want some place to lay their packages while making purchases. 'Sit down' cases are increasing in popularity. . . .

"Tests have taught us that customers don't want to stoop to reach too low or stretch to reach too high. Fixtures should provide proper devices for showing merchandise prices. . . .

"Many stores are going all out for customer convenience with such indirect selling fixtures as play pens for children, settees for the tired shopper or the husband who just came along, drinking fountains, etc.

"Fixtures should be tested for the convenience of employee operation to relieve fatigue and eliminate unnecessary steps. . . .

"Fixtures should be tested for maintenance cost. Where glass breakage is a hazard it is well to pay the extra cost of tempered glass. Where there is excessive wear, plastic impregnated woods should be used in the interest of economy.

"As the frame of a picture should intensify the observer's interest in the picture itself and not on the frame, so 'sales minded' fixtures should focus the buyers attention on the merchandise not on the equipment itself."

**ACCURATE...
RUGGED...
COMPACT...**

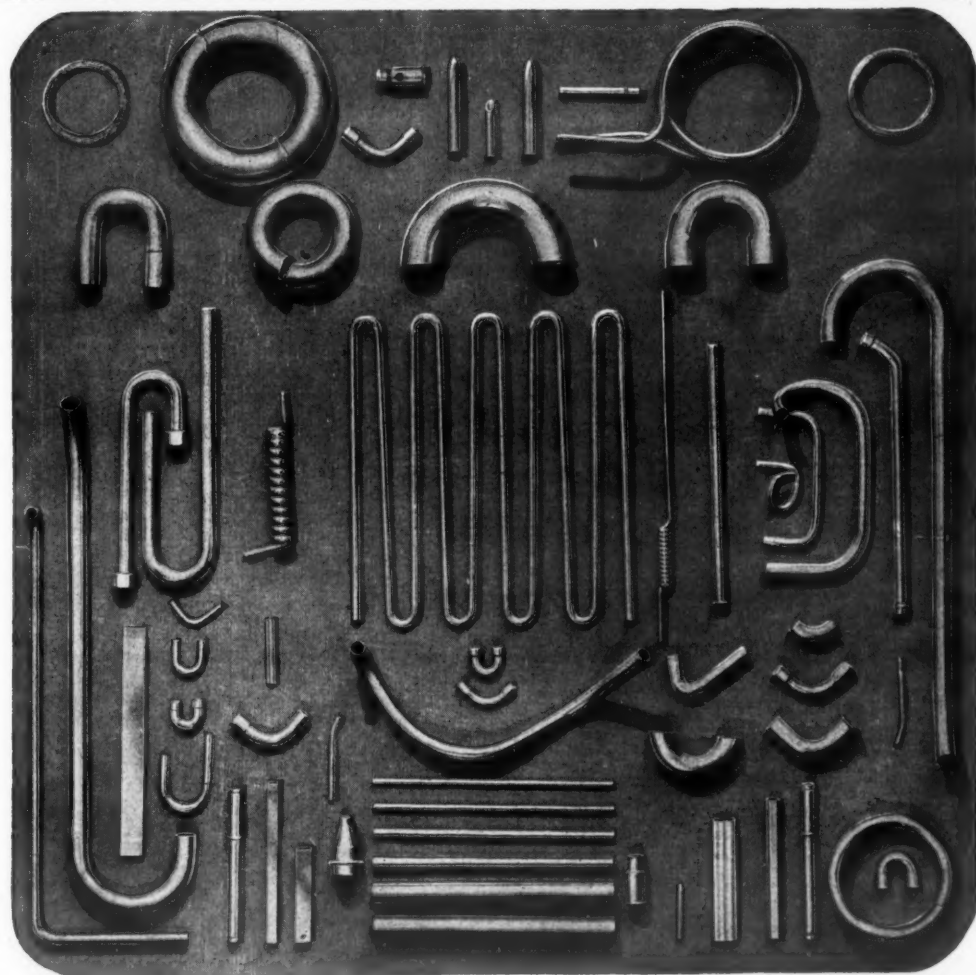
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PRESSURE SWITCH**

Available for pressures between 30-in. vacuum and 500 lb sq in. Metal bellows operate a reliable snap action precision switch, which has no levers, hinges, or pivots. Range and differential can be easily adjusted in the field. Also, see the Bulletin 837 Temperature Control. Write for full information. Allen-Bradley Co., 1313 S. First St., Milwaukee 4, Wis.



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Look for the tube with the Cup Seal End. It's exclusive with Anaconda Dehydrated Copper Refrigeration Tubes.



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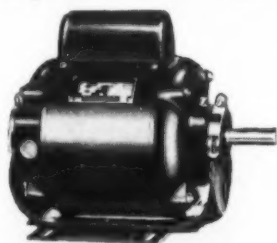
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Canada's Importance In World Affairs

WORLD WAR II, along with its not-entirely unexpected aftermath, has made Washington, D. C., the world's most important center of government, it seems.

But Canada's Ottawa, the nearest national capital to Washington, now is in the limelight, also.

The increased importance of all North America (Canada and Alaska, in addition to the United States) in the world defense plans of the leading Free Enterprise Nations has elevated Canada to a position of major responsibilities in the calculations of those military strategists who take seriously the preservation of Personal Freedom in its last-ditch fight against resurrected totalitarianism (militant Communist Russia).

Canada is a large and rich country. Its resources have only been scratched, tentatively; even though in the past decade they have developed enormously. Canada has plenty of room in which to grow. And its people—Canada's finest asset—combine the adventurous spirit of the new frontier with sanctified respect for hallowed tradition.

Canadian citizens are responsible, law-abiding human beings. They are conscientious, sober citizens who probably exemplify the Christian tradition, in all its manifold manifestations, more effectively than does the citizenry of any other nation in the Western Hemisphere (or in Europe, for that matter!).

Canada enjoys the freedom and individualism which are inherent in a young country. At the same time, the tested efficiency of its governmental and business methods is derived from proven old-country precepts. It has less *past* than the United Kingdom and France (from which its cues have been taken) but it has more *future*.

The Canadian government is presumably representative, superbly democratic, decently efficient, obviously well articulated, and capably led. There seems to be something about political life in Canada which attracts unusually capable men to public service. (Somehow, this phenomenon doesn't seem to happen often enough in the United States.)

We can—and should—learn a lot from our Canadian neighbors.

Surely, any reader of the foreign news despatches would agree that the United States and Canada should work closely together during the present queasy "cold war" years. Canadians and Americans are normal human beings. They yearn for Security and Prosperity; yet they fear that World War III might come any moment, thus ending all their dreams of self-betterment. If World War III does come, however, they'd both fight side-by-side to preserve their treasured political independence.

Each country has much to give the other in the way of mutual exchange of industrial techniques and resources, mutual exchange of goods and investments, and mutual exchange of political ideas.

The two North American free-enterprise-loving nations should comprise an international team that can show the rest of the world *what it is possible to attain* under a personal-worth system of economic adventures (Free Enterprise) which glorifies the individual man and champions Freedom for ALL men. Communism as a theory has nothing to offer the world's drowsy derelicts and confused confusioners that this U. S.-Canadian Free Enterprise team cannot surpass by example.

Canada and the United States are in a position to offer a heart-warming quality of leadership to the rest of the world.

Together, the U. S. and Canada can reconstruct a displaced world, and keep it functioning for peace, prosperity, and humanity. Political union may not be feasible; but moral unity for world leadership is.

Let's get together and see what we can do.

Preferred...



DEPENDABLE Refrigeration Valves

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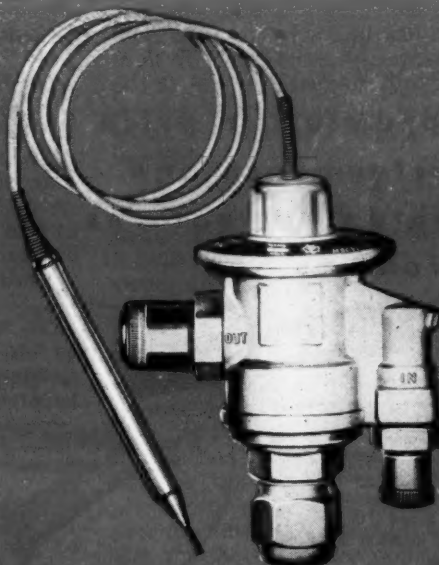
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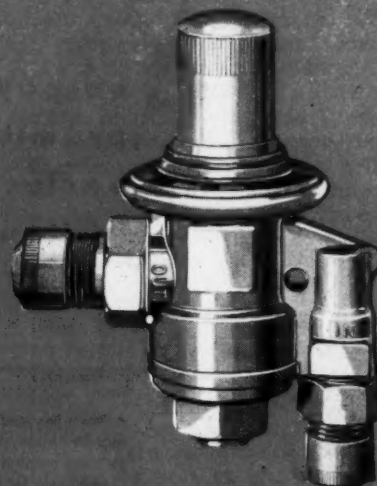


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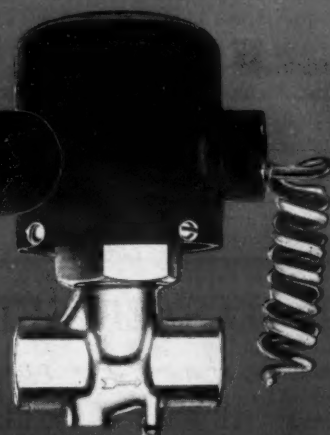
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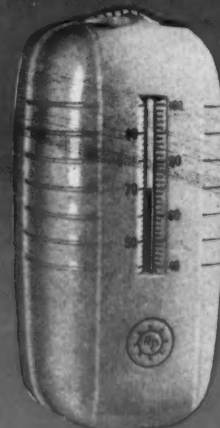
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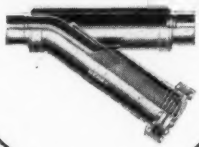
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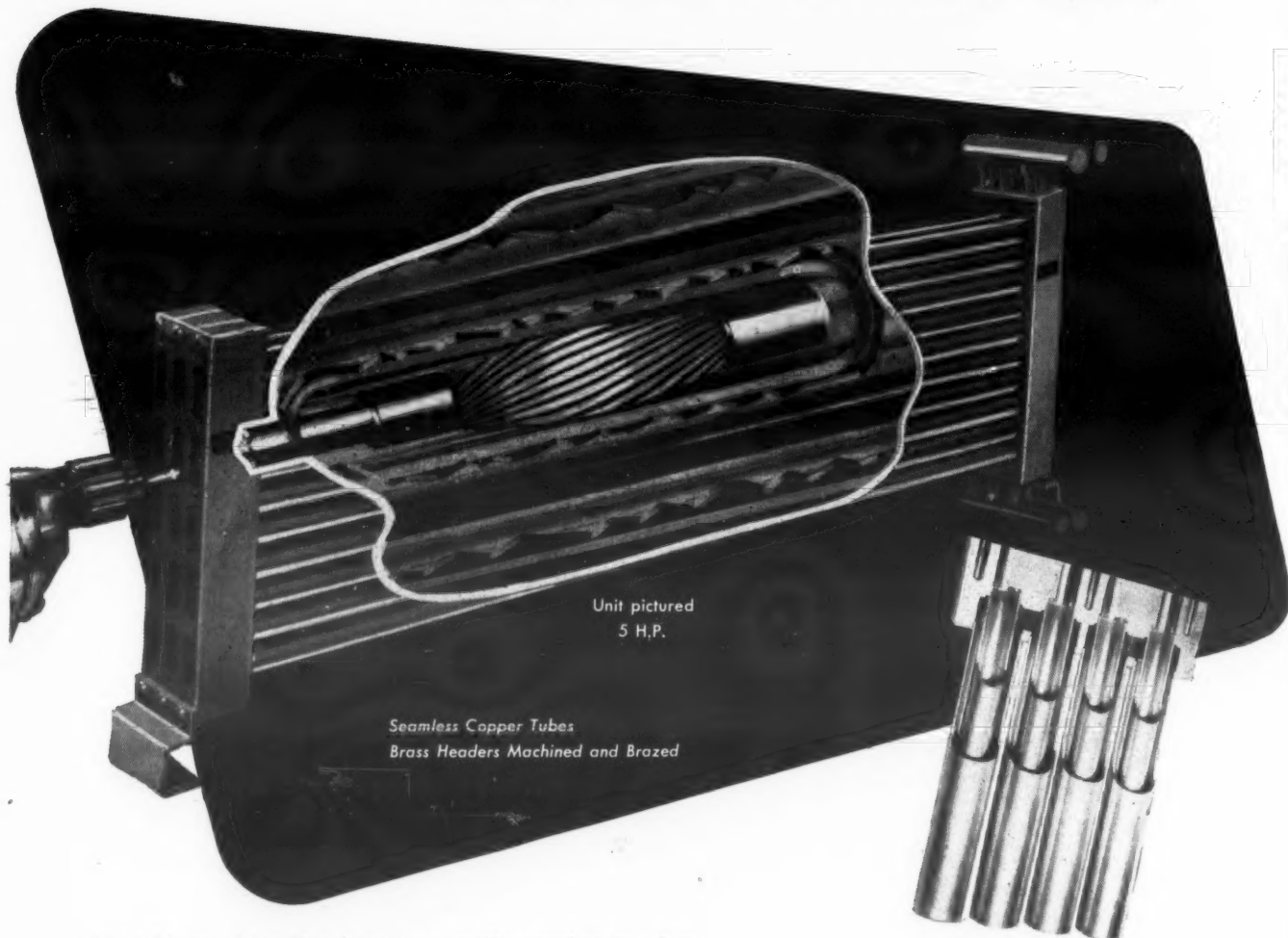
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BUSINESS NEWS PUBLISHING CO., DETROIT

NEW UNIT EFFICIENCY *always* with **HM** CLEANABLE CONDENSERS

and the new two-stage design
insures maximum heat transfer capacity



Unit pictured
5 H.P.

Seamless Copper Tubes
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HM Cleanable Condensers can be maintained at "new-unit" efficiency and economy by regular and continued use of a standard cleaning tool. Water tubes are accessible at both ends—just loosen a few bolts and slide the end plates off—and there is nothing to obstruct the simple cleaning operation. Each quick cleaning operation takes only minutes, yet restores copper water surfaces to their original heat exchange efficiencies and adds months and years of the most efficient and economical service to the life of your refrigeration unit.

HM's new two-stage condenser design affords greater concentration of copper water-tube surfaces in the lower portion of the condenser. The smaller top water tubes allow ample refrigerant space, thereby eliminating resistance or pressure drop and affording the lowest possible head pressures. With this new construction, greatest possible heat-transfer values are effected.

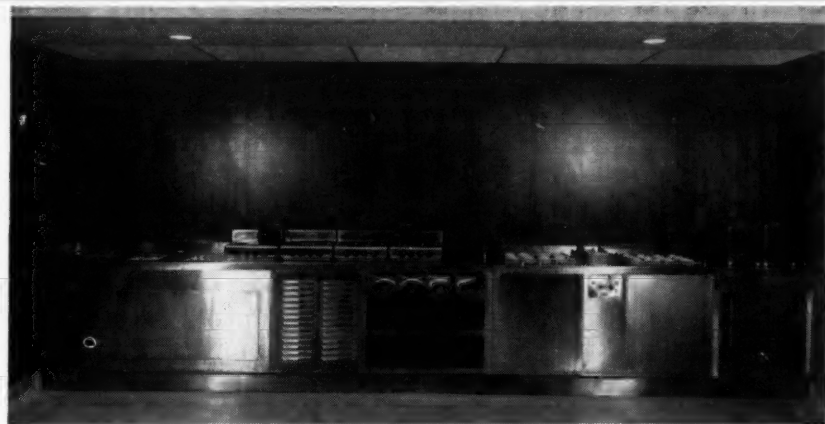


Halstead & Mitchell

JOBBERs in all principal cities carry HM condensers in stock.

OFFICES: Bessemer Building, Pittsburgh 22, Pa.

Refrigeration for 'Most Modern' Restaurant



The new Schrafft restaurant, opened this summer in the Esso building in Rockefeller Center, New York City, embodies all the newest in restaurant design and service. There are nine walk-in boxes providing 8,000 cu. ft. of refrigerated storage space, and many smaller refrigeration units placed in setup tables, cold food tables, dessert, and other functional points. There is even a special garbage refrigerator. The above pictured special service station has a refrigerated section at the left to keep milk and butter chilled and ready for instant service, while the section at the right keeps soup and coffee cups hot.



Sandwich stations in one of the serving rooms in the Schrafft restaurant. Dish wells for holding sandwich mixtures are refrigerated, and refrigerated space below the tables provide ample storage space for reserve supplies.



Three of the nine walk-in refrigerators which are located in the main kitchen and in the service rooms. Note the window in the doors which permits a check on the supplies without the need of opening the door. Each of the walk-ins is controlled to suit the type of food it holds—meats, ice cream, fresh vegetables, milk, candy, butter, or eggs.

Loudon Showing 1949 Dough Retarder Line

MINNEAPOLIS — Loudon Sales, Inc., Minneapolis, has introduced its new 1949 line of dough retarder refrigerators.

Available in three sizes, in stainless steel or Dulux finish, the units can be ordered self-contained or remote, as preferred.

Chrome plated brass hardware is used throughout. These high humidity cabinets are equipped with a large hidden blower coil in the top. They come complete with slides for bake pans.

'Shorthouse Butchereria' Locker Plant In Canada

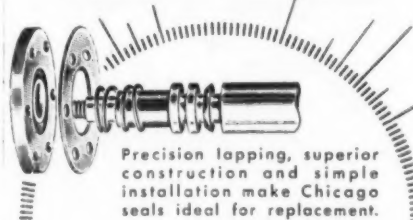
NELSON, B. C., Can.—A locker plant by any other name would be just as cold.

But all the same, owners of a new 250-drawer locker plant prefer to have their establishment known by the singular title of "Shorthouse Butchereria."

Each of the 6-cu. ft. lockers has a constant storage temperature of 0°. For quick freezing of food at -10°, the locker plant has installed a new blower unit.

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Question: Can I Adapt Theater Air Washer System To Handle High Humidity Loads?

Do you have any questions or problems in air conditioning application which need an authoritative answer? If so, write to AIR CONDITIONING & REFRIGERATION NEWS.

He was confronted with a problem on a theater air conditioning job, and he now has an answer and suggestions from James J. LaSalvia, veteran air conditioning engineer and author of the "Key to Air Conditioning" series now running in the NEWS.

Mr. LaSalvia will be pleased to discuss any problems you have concerning the application of air conditioning.

Southern Refrigeration Service
Newton, Miss.

Editor:

I am writing you concerning a problem relating to a washed air system in a theater.

As you know here in the south we have a very high average humidity and washed air conditioning works only at certain seasons of the year, and then only during very dry periods, and the installation I have in mind is no exception.

In the theater at the present time is an air washer that seems to be very efficient as air washers go, but under seasonal conditions the humidity gets so high that with an air change every minute it's very uncomfortable.

So what we have in mind was to slightly cool the water in the sump of the washer and in doing so lower the water temperature below the dewpoint of the incoming air and

causing a lower humidity in the final washed air.

Before we attempt anything of this sort we would like to have some more information concerning how much we would have to lower the temperature of the water to lower the temperature inside an appreciable amount.

Our water temperature here runs about an average of 85°, humidity 80%, the fan operating behind the air washer throws about 20,000 c.f.m. We figure the actual air conditioning load would be 30 tons for the theater.

This apparatus will only be used during high humidity conditions and therefore we want to keep the size of the equipment needed as small as possible.

We sincerely hope you can give us the necessary information on this, and whether it is feasible to go ahead with.

GEO. M. ICKES

age of water can be had and in the second place too large of a compressor would be required to keep the water in the pan always cooled to 51° F.

I recommend for your particular problem what is known as the Storage System of cooling. Here a compressor is used to cool water in a storage tank by means of submerged pipe coil evaporators, during the full 24 hours of each day and to utilize this cold water at the sprays of the air washer while the theater is in use.

The water is cooled to 35° F. The cold water to the sprays would be kept at 51° F. The pump supplying the sprays will take a proportioned amount of 35° water from the storage tank and this is mixed with a proportioned amount of water coming back from the air washer before it is returned to the storage tank.

In this manner 51° water will be maintained at the sprays and after the day's run at 11 p.m. the water in the storage tank will be 55° F. With the load off from the theater the compressor now concentrates to cooling the water in the storage tank to 35° for the next day's operation.

If washer is located at same level as the storage tank, the present washer pump can be reused for the same purpose. But an additional pump of same size will have to be used to take the water from pan of air washer and return it to storage tank, providing a by-pass connection to the suction side of washer pump.

If washer is above storage tank, the water in the pan of the washer can return by gravity to the storage tank, providing a by-pass to washer pump. This will eliminate one pump. Present washer pump would have to be installed near storage tank and

water pumped up to sprays.

In this manner there will be supplied 30 tons of refrigeration to the theater every hour and will maintain it at 75° F. effective temperature or 80° F. dry bulb temperature and 55% relative humidity at extreme outside conditions and full capacity of the theater.

The compressor will operate on thermostatic control, so that when water in storage tank reaches 35° F. it will shut off and start again on rising above 35° F.

Between storage tank and washer pump a three-way mixing valve is installed to mix the water from storage tank and by-pass water from washer, and controlled from thermostat installed and set at 51° on discharge line of washer pump. In this manner the washer is always supplied with 51° water, so as to prorate the cold storage water to last for the entire day's operation of the theater.

Water Cooled at Night

When theater closes at 11 p.m. the water in storage tank will have reached 55° F. This 55° water is cooled down again to 35° for next day's operation. When the theater has small crowds the compressor will not operate as much as when it has large crowds.

If condensing water for the compressor, which will amount to about 20 g.p.m. is out of the question, then install a cooling tower.

Provide a recirculation duct from the rear of theater to the air washer. Choke down the outside air duct so that only 3,000 c.f.m. of outside air is taken to the washer. Recirculate 17,000 c.f.m. to make the total air supplied 20,000 c.f.m. The tempera-

ture of the air mixture entering washer will be 82° dry bulb, 70° bulb, and 64° dewpoint. The air leaving the washer will be 74° F. dry bulb and 60° dewpoint temperature.

With refrigeration the above total air of 20,000 c.f.m. can be cut down to as low as 12,000 c.f.m. with 3,000 c.f.m. as outside air and 9,000 c.f.m. recirculated. In this case the mixture entering the washer will have slightly higher temperatures and the air leaving the washer will be lower.

Specifications of Equipment

a. Storage tank should be 20 ft. long by 10 ft. wide and 6 ft. high, made out of steel sheets or concrete. Insulated with 1½ in. of rigid insulation. The storage capacity is 8,500 gals.

b. There should be 2,100 total lineal feet of 1 in. extra heavy pipe, oval shaped, made into 3 or 4 small coils with expansion valve on each coil.

c. Pump supplying the sprays in air washer must have capacity of 190 g.p.m. This is same capacity as present pump.

d. Pump returning the water from pan of washer to storage tank must have a capacity of 190 g.p.m.

e. Compressor must have a capacity of 140,000 B.t.u. per hour, when operating at 24° F. suction temperature, with 85° condensing water temperature.

For complete information and details on the Storage System of Cooling as recommended refer to articles written by the writer and published by AIR CONDITIONING & REFRIGERATION NEWS in the Sept. 22, and 29, and Oct. 6, 1947 issues.

JAMES J. LASALVIA

Answer: Not Without a Definite Amount of Refrigeration Equipment

Answer: All theater problems in air conditioning are the same throughout the country. The outside conditions are practically the same, except that one section of the country may have slightly drier air than another, and the point to consider on outside air is "how much outside air is being used with the air conditioning system." It is not economical to use all outside air with an air conditioning system.

The inside conditions are the most important, as these conditions are affected by the number of people present. It is the heat given off by the people which we must chiefly consider, and unless this heat is removed as it is given off, the inside conditions will be uncomfortable.

Therefore the air entering the theater must be dry enough and cold enough to remove the sensible and latent heat given off by the people to have comfort.

When using such a system as yours, namely an air washer with sprays and no cooling equipment, comfort cannot be had when outside temperatures are above 75° F. and the theater is fully occupied.

Some comfort can be had when the outside temperatures are below 75° F. and the amount of comfort will depend entirely upon the wet bulb temperature of the outside air. Comfort will increase as the wet bulb lowers and vice-versa.

Air Conditioning Needed

So all theaters, especially in your region where there is a prolonged duration of high temperatures and humidities, should be air conditioned.

Many theater owners have the idea just by introducing a small amount of cooling, they can lower the inside conditions a few degrees and that it will suffice. This is a most dangerous idea if carried out, because under such conditions no latent heat would be removed and wetter conditions would prevail inside than outside. This would be worse than if no

cooling was installed. It would be just a waste of money.

In your case because of the prolonged periods of high temperatures and humidities, it is necessary to provide a definite amount of refrigeration and no less and also some changes to the existing system so as to provide the minimum requirements for comfort.

For minimum inside requirements it is necessary to design for an effective temperature of 75° F. which means to maintain 80° F. dry bulb temperature and 55% relative humidity when the outside conditions (in your case) would be 95° F. dry bulb and 78° F. wet bulb temperatures and 70° F. dewpoint temperature. And in order to get these conditions the water to be sprayed in the air washer must not be higher than 51° F.

Assumptions on Job

As the information in your letter is not sufficient for the writer to lay down exact figures, I am making certain assumptions which I believe will fit your problem. My figures and information are based on these assumptions:

1. Your estimate of 30 tons as the total load, means that under minimum requirements this would take care of 600 people.

2. The present air washer takes in all outside air and has a capacity of 20,000 c.f.m. The velocity of the air through the washer is 500 f.p.m. and the approximate cross section is 42 sq. ft. or 7 ft. wide and 6 ft. high. The washer has one bank of sprays and that the washer pump is supplying approximately 200 g.p.m. through 40 spray nozzles.

3. City water is 85° F.

4. That the theater is open for business from 1 p.m. to 11 p.m. each day.

Your idea of just cooling the water in the pan of the air washer by submerged pipe coils is not practical. In the first place not sufficient stor-



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CONTROL SWITCH

... is possible only with WHITE-RODGERS HYDRAULIC-ACTION CONTROLS

Only with the tremendous force of the Hydraulic-Action principle of expansion can you cause this rugged, sturdy switch to open and close. Because of this positive force, and because of the dependable, straight-line expansion of Hydraulic-Action, White-Rodgers Controls achieve a degree of accuracy never before approached in temperature controls.

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Recent improvements in the method of manufacture of White-Rodgers controls assure even more dependable control operation than ever before. If you have not received one, write today for your copy of the White-Rodgers Refrigeration Control Catalog.

Here's How it Works

This is an accurate thermometer. The liquid moves an equal distance up and down in the stem with each degree of temperature change.

These two diagrams show how the Hydraulic-Action element actually operates just like an accurate thermometer, causing the diaphragm to move an equal distance with each degree of temperature change.

This diagram illustrates how the movement of the diaphragm is transmitted through a stud to operate the switch. Adjustment at dial causes switch to function at the desired temperature.

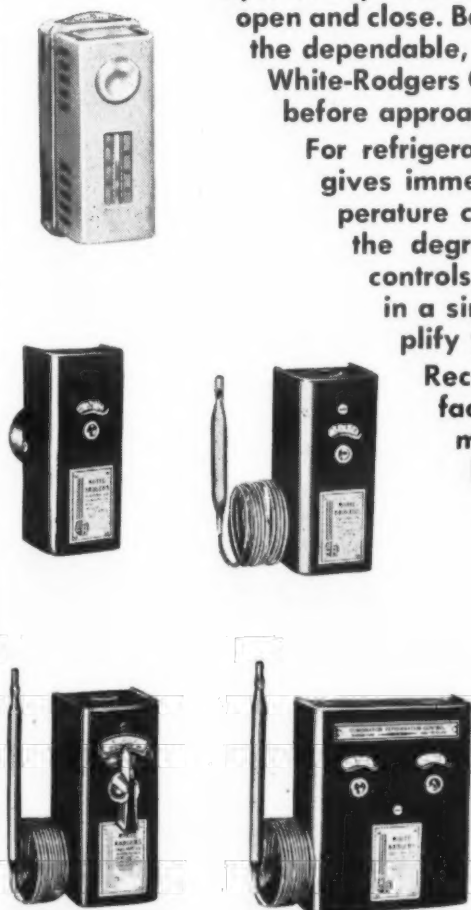


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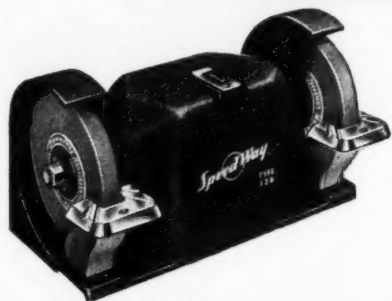
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What's New**Speed-Way Mfg. Introduces New Twin-Wheel Grinder**

CICERO, Ill.—Speed-Way Mfg. Co. here has recently announced a new 1/4-hp. grinder, Type No. 128. It is said to deliver in excess of 200 watts and attain a no-load speed of 3,500 r.p.m. on 60 cycles.

Designed for use in the workshop, garage, or farm shop, the grinder is equipped with two 6-in. by 3/4-in. wheels and has fully adjustable tool rests with pre-set angles for sharpening drill bits, plane blades, and chisels, according to Speed-Way. It is 14 in. long, 8 in. high, and weighs 22 1/2 lbs.

Design of the twin grinder is said to be both functional and attractive.

It is powered by a straight a.c., two-pole, shaded pole motor, which eliminates the need for starting switches, commutators, and brushes which often lead to costly repairs and replacements.

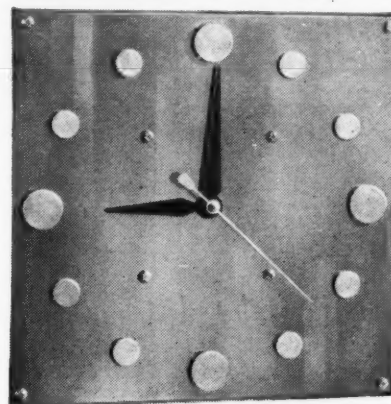
Baldor Co. Air Circulator Comes In 2 Floor Models

ST. LOUIS—Baldor Electric Co. here is manufacturing a new floor type air circulator, which is said to feature a relay type capacitor start motor which has no centrifugal switch.

Air is circulated by a 24-in., dynamically balanced fan blade, according to the manufacturer. Air is directed at any angle by tilting the motor. To minimize maintenance the manufacturer has used a motor with sealed ball bearings, requiring no oiling.

A large cast iron base is provided for sturdy floor mounting, and the column is chrome plated. A 14-ft. cord with stop switch mounted in it is provided, according to the Baldor company.

Model B-241 runs at 1,725 r.p.m. with a 1/4-hp. motor for greater volume and velocity of air, while Model B-242 operates at 1,140 r.p.m. with a 1/8-hp. motor for greater quietness. Both sell at \$89.50, including Federal excise tax, according to the company.

**Only Hands, Characters Project from Wall Clock**

KANSAS CITY, Mo.—Harley's Clock Shop here is manufacturing a line of flush type clocks, which are said to mount right in the wall with only the hands and characters projecting.

The clocks, which are available in four models, are designed for home or office use, and can be installed in old or new buildings. Elimination of the reflecting glass over the face of the clock is said to eliminate distortion.

Model 202S, which sells for \$27.50, features silver plated studs so background can be painted as the wall and the paint wiped from the studs, so only the characters and hands show. Hands on this model are removable for painting.

Other models range in price from \$14.95 to \$45.00 exclusive of tax.

galvanized steel against excessive corrosion in aggressive water areas is also standard equipment.

To facilitate installation and servicing, plumbing and electrical connections are at the front of the water heater, and an easily accessible drain is provided for emptying heaters installed in summer camps.

Poteat said the new water heater will be available for August deliveries. Other redesigned models, including the 30-gal. table-top heater and a full line of round models up to 86-gal. size, are being shipped now.

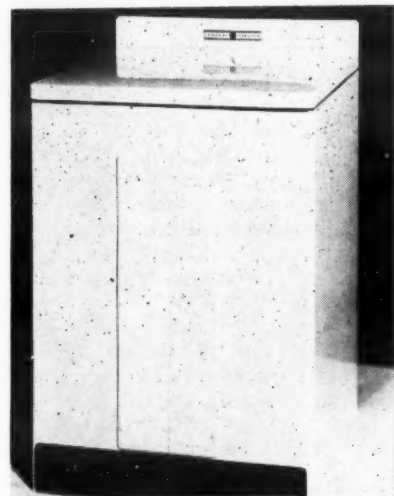
**Coldspot, Bohn Units Can Use Wagner Check Valve**

LONG ISLAND CITY, N. Y.—An improved replacement check valve for Coldspot and Bohn direct drive units is being introduced by the Wagner Tool & Supply Corp. here.

The check valve assembly, according to the manufacturer, is completely self-contained in an all-brass housing that has an extended portion 1/2 in. long by .3155 in. diameter.

This portion is driven into the 5/16 in. opening of the original check valve seat, thus forming a pressed fit, the manufacturer explained.

It is claimed that the new product eliminates the need for lapping or grinding and can be quickly installed or removed through the upper port of the unit. The only tool required is a standard threaded 5/16 in. bolt, he added.

Water Heater's Plumbing, Wiring Connect at Front

BRIDGEPORT, Conn.—A new 40-gal. table-top electric water heater that occupies no more space than the present 30-gal. model has been announced by J. R. Poteat, manager of the General Electric Co.'s range and water heater divisions.

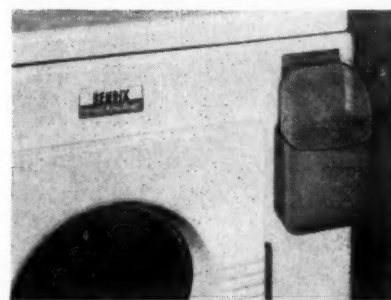
The heater is designed primarily for use in the kitchens of small houses without basements. According to estimates, 30 to 40% more homes of this type are being built today than before the war.

Enclosed in a rectangular steel shell with a white porcelain-enamel top that is resistant to acid and heat, the new water heater is only 24 in. wide, 25 1/2 in. deep, and 36 in. high. It has a 3 1/2-in. backsplash corresponding to that on standard kitchen counter tops.

Water is heated by improved Calrod units which encircle the galvanized steel tank. "The same units are used throughout our 1949 line of water heaters," Poteat said.

Standard equipment for the new 40-gal. heater is either one or two heating units, permitting the use of any desired wattages. The units are held tight to the tank by steel channels under pressure. Each unit has its own thermostat.

A new and larger magnesium rod inserted into the tank to protect the

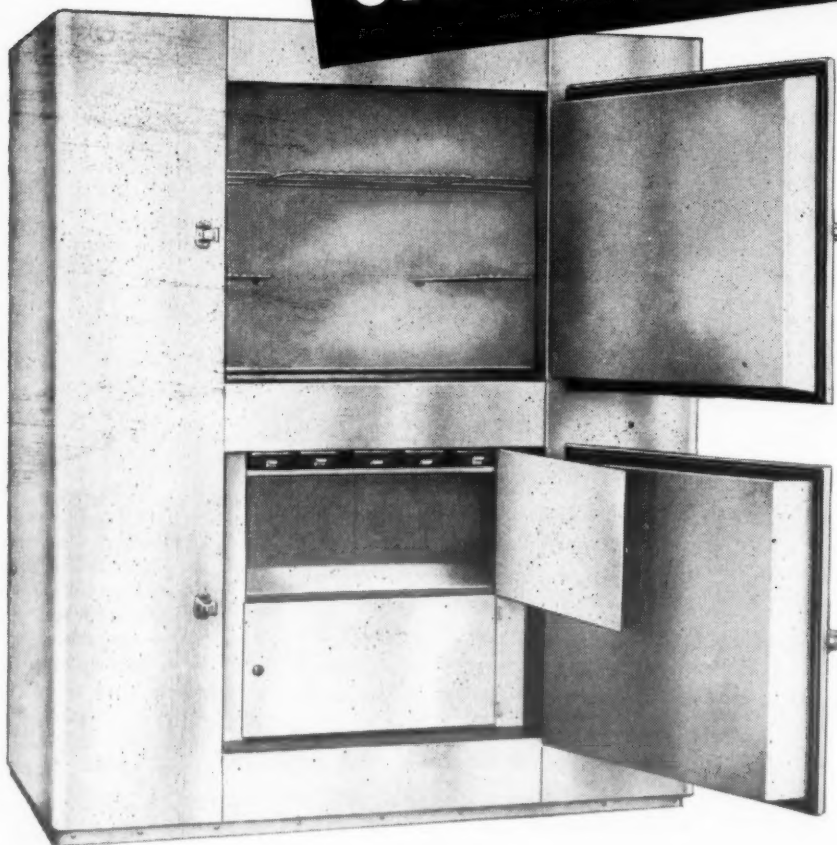
Clothes Dryer Lint Is Trapped by Bendix Filter

SOUTH BEND, Ind.—An air filter which is said to end the lint problem is announced by Bendix Home Appliances, Inc., as optional equipment for its automatic clothes dryer.

Tests have proved it effective in trapping the lint exhausted by the dryer, as well as the fine dust which escapes the ordinary screen filter, Bendix officials claim. The air filter consists of a container, made of bakelite; a screen which fits over the container, and a hook by which the container is fastened to the dryer.

Simple in construction and operation, the Bendix air filter uses water as the filtering agent. Air exhausted by the dryer strikes the top of the water, setting up a turbulence which soaks the lint and causes it to settle. The current of air then turns along the water surface and exhausts at the outer edge of the container. Any lint not caught in the water is retained by the screen.

Both the container and screen are removable for quick, easy cleaning.

United's TWO-TEMP...**GIVES MULTIPLE SERVICE**

All the advantages of an upright freezer *plus* a reach-in in the same unit—that's United's Two-Temp! Built for efficient operation and lasting, trouble-free service with extra thick approved insulation, lacquer finished heavy gauge highly polished aluminum exterior, natural finished aluminum interior.

CHECK UNITED'S MANY FEATURES

- ✓ 18 3/4 cubic feet reach-in with adjustable shelves
- ✓ 15 cubic feet freezer with five ice cube trays
- ✓ Convenient upright design
- ✓ 2 compartments in freezer for efficient storage, less cold loss

UNITED'S SIZE-WISE UPRIGHT FREEZERS**30 CU. FT. FREEZER**

Heavy gauge lacquer finished aluminum exterior, polished aluminum interior. Five 6 cu. ft. compartments. Extra thick approved insulation. Remote operation only.

16 CU. FT. FREEZER

United's 16 cu. ft. upright freezer, divided into four compartments, is self contained, ready to plug in and use. Heavy gauge aluminum construction, extra thick approved insulation.

United

For information write or call:

REFRIGERATOR COMPANY

350 ROBERT STREET

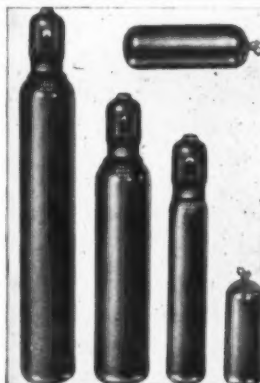
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BOTTLE COOLERS • REACH-INS • WALK-INS • ICE CUBE MAKERS • BEVERAGE DISPENSER

"SEAMLESS" REFRIGERANT CYLINDERS

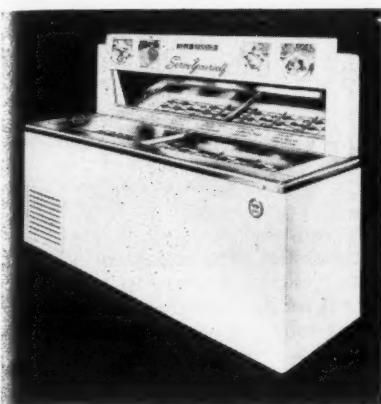
Built and stamped to ICC 3B-300 specifications. Seamless construction of heavy gauge metal. Tested with hydrostatic pressure. Extra large capacities. Glossy red prime lacquer finish. Supplied complete with valves, caps, etc., as required. Improved "ERECT" style in 5# size.

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Fine PRODUCTS COMPANY
185 NORTH WABASH AVENUE • CHICAGO 1, ILLINOIS



What's New (Cont.)

Mirror, Pictures Mark Merchandising Cabinet



DAYTON, Ohio—A new 18-cu. ft. self-service frozen food and ice cream display cabinet is now being supplied by Frigidaire Division, General Motors Corp.

Four illuminated food pictures are a special feature of the cabinet. Mounted in a full-length superstructure designed to attract customers from any part of a store, the pictures reproduce foods in three-dimensional color through a new photographic process.

An angled, illuminated mirror is placed across the entire white enamel top panel to dramatize the display. Changeable price cards are located just beneath the mirror.

The cabinet can be equipped with an animated, illuminated sign.

In the storage compartment are wire partitions, dividing the space into individual sections. Made of heavy gauge steel, all joints are seam-welded.

Covering the entire food compartment are two hermetically-sealed, non-fogging glass doors. Ball bearing rollers and metal guides provide a door glide while the doors may be removed for rush hour service. To absorb shock and seal in cold, the glass is mounted with rubber gaskets in stainless steel frames.

Low-temperature refrigeration is supplied by a 1/2-hp. reciprocating compressor. Seamless copper tubing surrounds the food storage compartment. The compressor compartment is accessible through a louvered removable front panel.

A temperature control and 5 in. of fibrous glass insulation are other features.

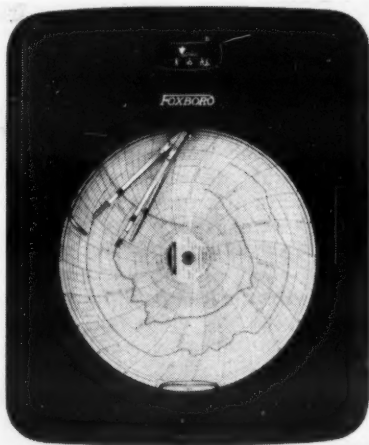
The merchandising top is available as a separate unit for mounting on double-row ice cream cabinets.

New Instrument Controls From Two Variables

FOXBORO, Mass. — The Auto-Selector controller, an addition to the line of industrial control instruments offered by The Foxboro Co. here, is an instrument that controls, selectively, from either of two related variables, by positioning a single valve, damper, or other operator.

This selection is determined by the variable having the greater tendency to exceed its pre-set limit; and the transfer of control is made smoothly, instantly, and automatically.

The Auto-Selector not only does the work which previously required two controllers, but has an added function in that it may incorporate the automatic reset function in the control of either or both variables. The design of the instrument embodies two measuring systems and two inter-connected Foxboro Model 40 control mechanisms. Control action of both mechanisms may be on-off, proportional, proportional with



Recording Auto-Selector Controller

derivative, proportional with reset (Stabilog), proportional with reset and derivative (Hyper-Reset), or any combination of these.

A typical application of the Auto-Selector controller is in a pipeline pumping station, where it controls either the discharge pressure or the suction pressure of the pump, in accordance with supply and demand requirements.

Other examples include the control of brine flow through a heat exchanger, to maintain the temperature of the cooled material at a pre-set value, as long as outlet brine temperature is above a pre-set minimum; also, the control of fuel supply to

operate an oven at a desired temperature, while keeping the heater temperature below a safe limit.

It is not necessary that the controlling measurements be of like variables. Any two that are related may be combined, such as outlet temperature and steam pressure in a heat exchanger, or temperature and flow of brine in a cooler.

The Auto-Selector controller is available as a recorder or indicator. It is fully described in The Foxboro Co.'s Bulletin 421.

New Plastic Metal Will Fill, Coat, and Bond

CLEVELAND — A plastic metal that can be used to fill seams or to coat or bond ferrous and non-ferrous metals, wood, glass, plastics, or other materials is now being produced by Prentke Products here.

Prentke plastic metal may be used like a cold solder, applied with a putty knife or spatula, or thinned with a Prentke solvent and wiped, brushed, or sprayed on, according to E. M. Prentke.

In addition, the plastic metal may be molded to desired shapes and built up to thickness. It can be drilled or machined, filed, sanded, ground, or buffed to a smooth aluminum-like finish, he said. This surface may be finished with lacquer or enamel.

The new product will be sold through refrigerator and appliance retailers in sizes ranging upward from 6 oz. packages.

Prentke claims that his product is superior in adhesion, durability, texture, and versatility.

Refrigerated Cup Vendor Offers Two Flavors



New refrigerated vendor for serving carbonated soft drinks in cups will offer two different flavors in the same machine. Unit will handle 800 drinks from one filling.

SYRACUSE, N. Y.—An automatic refrigerated vendor that dispenses two different-flavor cup drinks simultaneously is being produced by C. C. Bradley & Son, Inc.

Fashioned for installation in recreation centers, industrial plants, or wherever else large crowds congregate, the Bradley unit can handle 800 drinks (400 each of two flavors). Beverage syrups contained in stainless steel tanks automatically mix carbonated water and dispense a 6-oz. drink whenever a nickel is inserted in the machine.

Drinks prepared in this manner eliminate the need for bottles and thus all incidental storage and handling problems, the manufacturer emphasizes.

The cabinet is made of sheet steel with fluted stainless steel trimmings mounted on an angle iron frame. To facilitate replacement of any part of

the vari-colored cabinet, it is fabricated of removable sections that have an enamel finish.

Despite the fact that the Bradley vendor is capable of serving two customers different beverages at the same time, it maintains uniform quantity and quality of mixture by means of a special valve, states the company.

"Jackpotting" and cup failure are likewise claimed to be impossible, no matter how heavy the volume of coin insertions may be. Syrup used in making the soft drinks is pre-cooled to the temperature of the carbonated water.

Where feasible, the vendor may be connected directly to the water line. A water filter is provided to screen out chlorine and foreign matter.

Franchised operators of Bradley units will provide installation, syrup for the drinks, and 24-hour service.

HOW TO SELL REFRIGERATION TO THE PROSPECT WHO SAYS

I NEED NEW EQUIPMENT BUT I DON'T HAVE THE MONEY FOR IT

He is in the habit of paying his suppliers daily.

As a result, at the end of the month there is not enough left to pay large down payments and lump sum monthly payments.

Your Answer Is THE METER PLAN OF DAILY SAVINGS

Your Customer Deposits Just a Few Quarters a Day.



Meter-Matic DM6 Meter

- LOW IN PRICE
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Please send me FREE:

☐ Meter Catalog ☐ Meter Plan For Selling Commercial Refrigeration

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Mr. _____
Street _____
City _____ Zone _____ State _____

Dealers! Here's an immediate delivery item that will MOVE FAST

THE ECONOMY ANGLE ALONE WILL SELL IT!



NORTHWEST ICE CUBE MAKER

Sell it to quantity users of ice cubes: Restaurants, Institutions, Bars, Clubs, etc.

Note these Features:

- Stainless Steel Interior
- Automatic Cube Ejectors
- Sub-Zero Storage
- 3" Vapor Sealed Insulation
- Heavy Duty Hardware
- Self-contained or Remote Compressor

NORTHWEST EQUIPMENT CO.

3021 5th Ave. South
Minneapolis 8, Minn.

SELL THEM SINGLY OR IN MULTIPLE UNITS

- A 1 1/2 Bushel Storage Capacity (600 Cubes)
3 tiers—15 trays—210 cubes each freeze
- B 3 — Bushel Storage Capacity (1200 Cubes)
3 tiers—15 trays—210 cubes each freeze
3 tiers—24 trays—336 cubes each freeze
- B 5 — Bushel Storage Capacity (2000 cubes)
3 tiers—24 trays—336 cubes each freeze

insist on
genuine



products

MARLO - HEAT TRANSFER
Since 1925

REMCO "Liquid-Fin"
HEAT EXCHANGERS



LIQUID flows inside the spiral corrugations in "prime" heat exchange relationship with the colder higher velocity suction gases which travel outside the rapid-transer "Liquid-Fin" heat exchanger element. Capacity per unit size is very high.

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CANADIAN Refrigeration JOURNAL
A "National Business" Publication
137 Wellington St. W., Toronto, Ont.



EMPLOYEE, FUNDS, AUTO DISAPPEAR AT SAME TIME

Wyoming Refrigeration and
Equipment Co.
1910 Thomas Ave.
Cheyenne, Wyo.

Editor:

On July 19, 1948 a young fellow (description below) came in to our establishment seeking a position of refrigeration serviceman. He told us that he had just been released from the Marine Hospital in Seattle, Wash., that he had had bad luck and needed a job and had no money.

He gave us several Maritime references. We made the mistake of hiring him and writing for reference while he was working here. After about two weeks, he stole three of our checks and made them payable to himself and signed my name.

He went to several stores here with whom we have regular accounts and charged tools and fittings and forged one check for \$90 with a customer to whom he had sold a refrigeration unit and had been doing the installation in his store; another check for \$60, and one for \$1,000. The one for \$1,000 he gave to a local auto dealer and purchased a 1946 Lincoln club coupe with it. He had everything timed perfect as it was Saturday afternoon and he let him have the car with a temporary license.

He is pretty smooth as he acts quite shy and has a very sweet sort of smile and agrees with everything one says. He is now at large in a

1946 Lincoln and will probably frequent another refrigeration company. He stole a complete Bonney tool set, plus fittings, copper tubing, and a set of five Carrier manuals.

We will appreciate your putting these particulars in your next edition of AIR CONDITIONING & REFRIGERATION NEWS as we think it only fair to warn other distributors.

Description: 5 ft. 9 in. tall; age 26-28; 140 lbs. (very thin); blonde (thinning hair); slight limp of left leg (claims hurt in going down on mine sweeper during service).

Went by name of James Carl Anderson; travels with red head girl.

He talks a lot of Seattle and Oregon (Portland and Astoria). He was also wanted in Greeley, Colo., for passing checks, and is wanted here on forgery, grand larceny, and car theft. Advise any dealer to notify the local police.

FRANCES A. BRICE

MERCHANDISING IDEAS PROVE HELP TO DEALERS

Southwest Co.
Appliances, Tools, Implements
Dallas, Texas

Editor:

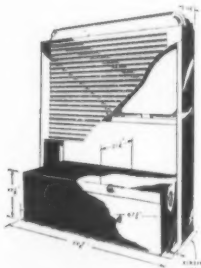
We take this opportunity to mention that we have found the NEWS to be of great interest to us for its fine merchandising ideas and its progressive attitude in regard to help for the dealers.

R. J. CONSTANTIN

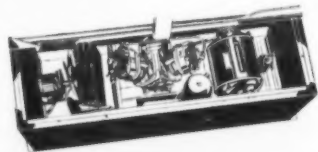
Pakaged REFRIGERATION

THE NEW KOLD-HOLD Package TRUCK UNIT for HIGH TEMPERATURE REFRIGERATION OF PERISHABLES . . .

The New Kold-Hold Package Refrigeration Unit means lower costs . . . added dividends to you. Its simplicity of installation and operation is the highlight of its success wherever high temperature perishables are transported by truck. Check the following features of the New KOLD-HOLD PACKAGE REFRIGERATION UNIT.



Self-contained, adjustable to almost any truck. The Unit can be lowered to 46 1/2" for installing through truck door. When installed, height can be adjusted for 57" minimum to 78" maximum heights.



The electrically driven compressor builds up a charge of flint ice in the "Hold-Over" Plates, which provides ample refrigeration over a day's run.

1. Operates efficiently, economically in any properly insulated truck, regardless of age.
2. Easily installed—simply cut intake and discharge holes, push into place, plug into any 110AC-60 Cycle Circuit*.
3. Maintains inside truck temperatures of 45° F. to 50° F. over a full day's run.
4. Provides ample refrigeration even in extreme weather conditions.
5. Recharging plates at any electrical outlet protects loads on long runs.
6. The 1 HP Compressor operates for a few cents a day.
7. Dry and odorless—no bother. Dependability at lower cost.
8. Kold-Hold "Hold Over" Refrigeration plates such as used in this unit have given satisfactory service for over 15 years.

*A 200V-60 Cycle Single Phase motor can be supplied on request.

The Kold-Hold Catalog contains information on the entire line of Kold-Hold Refrigeration Products. Write for your free copy today!

KOLD-HOLD

Jobbers in Principal Cities

PROCESSING TRANSPORTATION
protects every step of the way
STORAGE

KOLD-HOLD MANUFACTURING COMPANY - 500 E. HAZEL ST., LANSING 4, MICHIGAN

'MYSTERY OF MOISTURE' GETS ANOTHER SOLUTION

H & B Electric
Oakdale, Neb.

Editor:

I have just read the article on the Mystery of the Hidden Moisture.

I have had the same experience on several occasions. One I will tell about on a medium temp job.

It operated perfectly for one year and then moisture showed up. To my surprise I found ice in the coil just ahead of the expansion valve. The equipment was taken down and dehydrated and we had a recurrence of the same thing in 10 months. I found that by reflowing the coil where the expansion valve was coupled to the coil it cured the trouble.

There never was at any time a refrigerant leak in the system, but the moisture got in at that point. Now I know that there must have been a jet formed and drew the moisture into the system.

Later on I had several beverage coolers that would run about six months to a year that did the same thing. These were capillary systems and they were connected to the evaporator by a 1/4 in. flare nut. They came from the factory that way.

I found that the only permanent cure was to eliminate the flare by the use of sweat fittings. Several of these jobs so serviced are still in operation.

We checked with the factory and found that they had a complaint and used a liquid to stop the freezing, but it was not a permanent cure.

What the cause of this trouble, I believe, is in a contraction of metal and a jet suction is formed and draws the moisture in because in every case I have found that a good sweat job will cure it.

You may pass this information along if it is of any good to any one.

You may get more information from tests as I have made several and they have helped in solving such problems.

STUART HARTIGAN

HOME FREEZER PROMOTION MAY BEAR FRUIT SOON

Suttle Equipment Co.
Lawrenceville, Ill.

Editor:

Your continued editorial promotion on freezer selling is certainly inspiring, and should bear fruit.

May we have the privilege of boosting it along by reprinting Mr. Tyler's editorial in the July 5 issue, for distribution to our dealers?

We are distributor for Ben-Hur freezers and can attest to the truths outlined in your various editorials—both on what should be done, and the difficulties of getting it done. Nevertheless, our dealers are becoming freezer-conscious little by little.

B. D. QUACKENBUSH,
General Manager

Coastal Refrigeration Co.
Chehalis, Wash.

Editor:

May we have your permission to use your article by R. L. Tyler, which appeared in your July 5, 1948 issue?

Our office would like very much to use this as a letter to our dealers, with due credit to be given to your publication and to the author.

We want to take this opportunity to thank you and your staff for a very worthy publication. The AIR CONDITIONING & REFRIGERATION NEWS is a great help to us in the operation of our business.

WILLIAM B. VOGEL

IS SWITZERLAND BEST ARMED NATION IN WORLD?

Frigidaire
17, Boulevard Helvetique
Geneve, Switzerland

Editor:

In AIR CONDITIONING & REFRIGERATION NEWS of June 21, 1948 on page 16 we read your very interesting article entitled "To Arms, Hunters."

This article was very interesting as we Swiss people are very near the iron curtain and have had (a few years ago and next door) another curtain behind which were employed exactly the same methods of annexation.

In said article you mention that undoubtedly "the USA is the best prewar armed country in the world." We regret to disagree with you. In Switzerland we have also a lot of hunters but also an army, and this army, compared with our population, could easily be the biggest in the world.

During World War II nearly 20% of the population was mobilized. You know of course that military service is compulsory for every boy-citizen 20 years old. He goes through a four months course in the military school for recruits and each succeeding year, till 32 years old, he is mobilized for an intense three weeks military service.

To allow us to mobilize very quickly in an emergency case every soldier keeps in his home, his uniform, his personal weapon, and in war time, some ammunition. So, practically every Swiss citizen, declared physically normal keeps, between the age of 20 to 50, his uniform and his military gun at home.

Don't you think Switzerland is nowadays the best prewar armed country? By the way, don't think we do this to be proud of this first place but Switzerland knows for many centuries that the only way to be respected is to be strong, and we have proved that one can be strong without being aggressive. People from a country known to have a well equipped and strong army do not necessarily think of war. We know of course that compared with other countries our military force is only a potential one but it is really necessary that people show their absolute will to put individual freedom first.

I am, for years, a regular reader of the NEWS and take this opportunity to congratulate you on the very interesting articles which often appear trying to educate the minds of business people in other directions than purely professional ones.

RENE-L. ODIER

LA SALVIA ARTICLES WILL APPEAR IN BOOK

Canadian General Electric Co.
Toronto, Ont.

Editor:

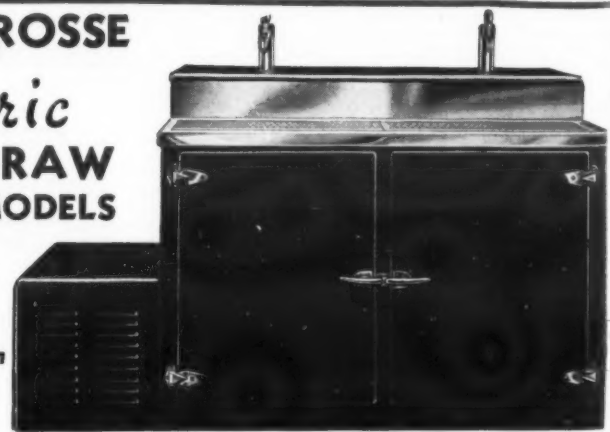
Would you please advise the list of articles appearing in the Key to Air Conditioning which have been reprinted. We have been very interested in some of the articles appearing in this Section of the AIR CONDITIONING & REFRIGERATION NEWS and if you would list for us the articles which are being reprinted we would appreciate it very much.

A. C. WARRENDER,
Manager, Automatic Heating and Air Conditioning Section, Air Conditioning Division, Supply Dept.

Answer: The whole series will be published in book form, so no attempt has been made to prepare individual reprints. The complete book, we feel, will prove of much greater benefit to readers than reprints of individual instalments.

THE LA CROSSE Electric DIRECT DRAW 2 & 3 KEG MODELS

Regarded as the
Standard of
Comparison for
Design, Construction
& Performance.

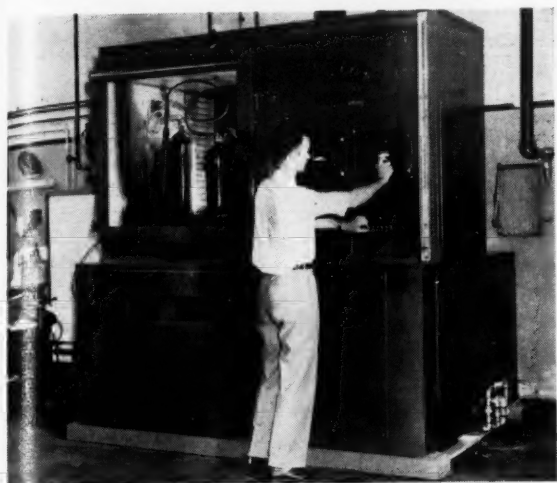


LA CROSSE COOLER CO.
2809 Losey Blvd. So., La Crosse, Wisconsin

Export Representatives: Melvin Pine & Co.
Cable address: Eximport 80 Broad St., New York 4, New York



Kidde Firm Does Something About the Weather



At the left is a Walter Kidde & Co. engineer adjusting the Bowser low-temp. testing cabinet, used in the Kidde laboratories to subject fire fighting equipment to extreme conditions.

Refrigeration Allows Test of Fire Fighting Tools in Plant Under 'Worse-Than-Natural' Conditions

NEW YORK CITY—In the test and research laboratories of Walter Kidde & Co. is a new mechanical weather-maker that produces conditions of temperature, pressure, and humidity more extreme than any encountered by Kidde fire protection equipment in actual service.

Claiming to be the only manufacturer of fire extinguishing systems and portable extinguishers now using such test equipment (a Bowser refrigeration system), Kidde is constantly studying its products under extreme conditions to improve their effectiveness.

Extinguishing equipment and accessories to be tested are placed in a 27-cu. ft. chamber, behind a seven-layer thermopane glass door, which is then sealed. Temperatures in the test chamber can be varied from -100° F. to 180° F.; humidity from

20 to 95%; and pressure from that at sea level to 80,000 ft. altitude—all by dials controlling integral refrigeration and compressor machinery. Equipment under test is visible at all times through the glass door.

By producing any desired combination of temperature-humidity-pressure conditions, Kidde engineers can observe performance of aircraft fire protection systems, industrial installation equipment, and portable extinguisher units. The tests make it possible to study the behavior of extinguishing agents and their discharge patterns as well as mechanical parts of automatic and manual extinguishing systems under worse-than-natural circumstances.

The data obtained has been of considerable importance in the design and installation of Kidde products in aircraft, boats, and industrial plants.

Abe Rohr Appointed Agent For Loudon In Chicago Area

MINNEAPOLIS—Appointment of Abe Rohr, formerly with Stangard, as factory agent for the Loudon line of commercial refrigeration in Chicago is announced by Roy Loudon, president of Loudon Sales, Inc.

Expansion of the firm's activities is planned for the coming year and advertising and merchandising plans are being completed.

Freeze-It Corp. Will Build \$350,000 Cold Storage Plant

BURBANK, Calif.—Contract has been awarded for construction of a one-story and part two-story cold storage building here for the Freeze-It Corp., of which David Rasky is president.

The reinforced concrete structure will be 96 x 500 ft. in area and will be served by a spur track alongside a large loading dock.

Jeep and Trailer Deliver Frozen Foods, Groceries To Mountain Cabins

ESTES PARK, Colo.—Even the most remote mountain cabin can enjoy the advantages of frozen foods and fresh groceries since ex-G. I. Robert Carleton developed the Igloo Service—daily food marketing at the doorstep of mountain cabins surrounding this resort city.

Making possible this shopping service is a house-trailer which has been converted into a rolling grocery store, pulled by a jeep which can haul it over narrow ruts and gravel roads to high-altitude cabin sites. Painted a bright blue and silver, with an all white jeep leading the way, The Igloo can be seen for miles, and an automatic bell informs cabin tourists that "shopping time is here."

The interior of the trailer is fitted with two low-temperature refrigerators, one at each end, in addition to dry grocery shelving at either side, for canned goods, delicatessen products, bread, candies, gum, etc.

The two Tyler refrigerators are equipped with six compartments each, and refrigerated by means of cold plates which are charged by a local ice plant during the night hours. One devoted to frozen foods and meats, is capable of maintaining -30° for eight hours at average, and the other is kept at 35° for vegetables, meats, and dairy items.

Carleton supervises butchering of all meats sold in the Igloo trailer, and covers a route over 60 miles long each day. Sales are comparable to the average grocery store.

Dam Cool In Spite of the Season

Fourteen 75-Hp. Radial Compressors Speed Work on Project To Supply Seattle Power

SEATTLE—Fourteen 75-hp. radial compressors were trucked over highways, transported by electric railway, carried on barges, and hoisted several hundred feet to the top of the Ross dam 200 miles northeast of here to handle the final cooling of the dam being constructed for Seattle's municipal lighting department.

Located on the Skagit River, the Ross dam is one of several in the area. It stands 540 ft. above bedrock, is 200 ft. thick at the base and 33 ft. at the top, and backs up a reservoir 24 miles long for water storage.

Thanks to refrigeration, cooling of the dam could be completed independent of the weather.

The machines employed at this job were Model 14-H Chrysler Airtemp "Freon-12" units with a 10-ft. by 24-in. dry expansion water chiller, each system being charged with 400 lbs. of "Freon."

Housed in two groups on the top of the dam, each group chilled the cooling brine for approximately half of the dam, the units in a group being manifolded in parallel on the water side.

Condensing unit, water chiller, heat exchangers, controls, and piping for each individual system were mounted in a structural steel framework measuring 5 ft. wide, 10 ft. high, by 12 ft. 4 in. long.

Arrangement of the compressors within the framework consisted of

two 7-cylinder radial units connected on opposite ends of an 1,800 r.p.m. 60-hp. induction motor. Both compressors discharged into a single closed condenser mounted in the framework above the units and motor.

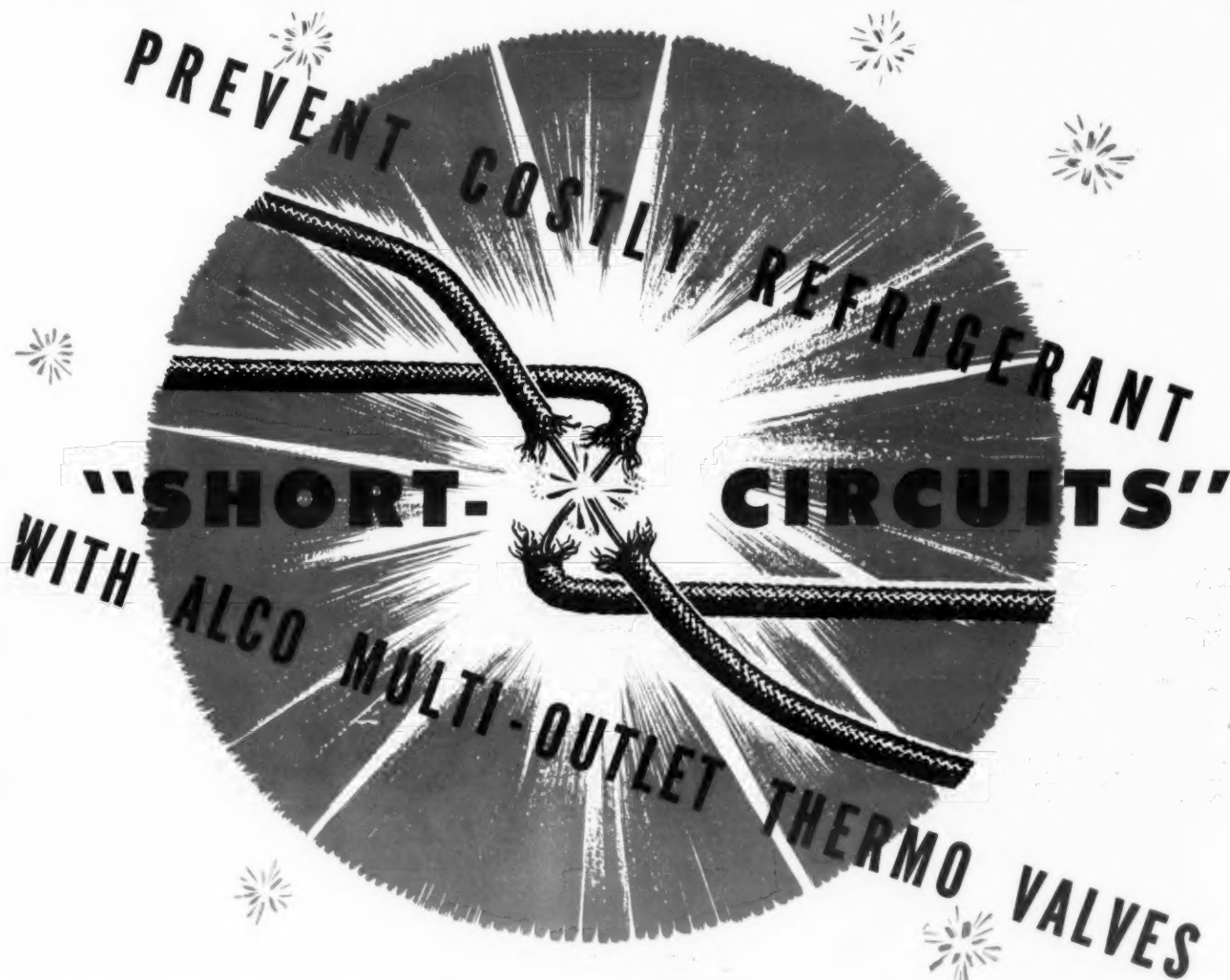
The water chillers were mounted above the condensers on a middle deck of the framework in each system. The chillers were rated as capable of cooling 240 g.p.m. of fresh water from 39° to 34° F.

Brine instead of fresh water, however was used to avoid freeze-ups due to low atmospheric temperatures. Operating on a closed cycle, the brine system employed the center compartment of a large steel barge at the base of the dam as a brine tank. Brine-circulating pumps were mounted on the barge, and connected by rubber hoses to the supply and return lines on the dam.

When the system was put in operation to speed the cooling of the dam, the temperature drop averaged 1/2° a day. The system ran for 37 days and then was shut down except when needed for short runs to cool a "hot spot."

Four of the 14 units operated almost continuously during the cooling period, according to E. R. Hoffman, who is superintendent of lighting for Seattle.

On the average, the equipment ran at 55.7% of capacity for the 37 days with the peak load being 99%.

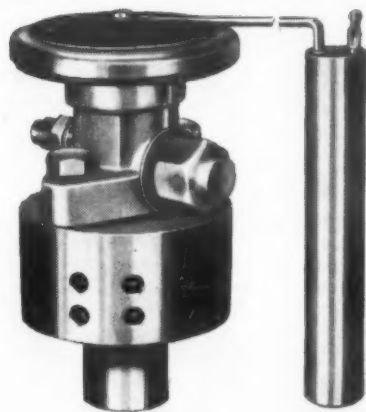


When poor distribution "short-circuits" the refrigerant through only a few passes, coil capacity is often cut 1/3 to 1/2 — efficient control is impossible — operating costs climb.

ALCO Multi-Outlet Thermo Valves assure:

- The refrigerant liquid is accurately metered at the point of expansion to all coil circuits
- Even distribution despite load variations
- Full rated coil capacity—every circuit on the job
- Instant, alert control—no "hunting" or "cycling"
- Higher operating suction pressure—more efficient compressor operation at lower cost

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- Precision Engineered
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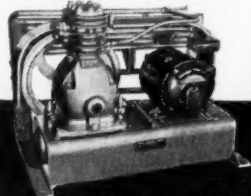
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The KEY to AIR CONDITIONING

by James J. LaSalvia

Cooling Load (Cont.)

FIGURING THE LOAD FOR A SMALL DEPARTMENT STORE

Let us take a problem such as a small department store, located somewhere in latitude 40°, and apply this data in determining the cooling load requirements. (Refer to Fig. 3.)

STEP NO. 1

Make a complete survey of the premises, the survey to consist of the following data:

Only the first floor is to be air conditioned.

Outside dry bulb temperature is 95° F.

Outside wet bulb temperature is 75° F.

Occupancy on first floor: 121 customers and 20 clerks.

Lights: 3,000 watts.

Windows: single glass with plain awnings, ventilated on west windows.

Windows: single glass with buff venetian blinds, inside on east windows.

Wall construction throughout is 12-in. brick with 1/2-in. plaster.

Floor construction is of yellow pine on wood sleepers embedded in 8 in.

of concrete, with ceiling below of 1/2-in. plaster.

Roof construction is of 4-in. concrete, 1 in. rigid insulation with metal lath and plaster ceiling.

Walls of adjacent store are of same thickness and material as above.

The basement is to be used for storage and miscellaneous work and is not to be air conditioned.

The south wall of the store is adjacent to another store which is air conditioned. Therefore, it is not to be used in the calculations.

STEP NO. 2

Select or compute the coefficient of transmission U for walls, glass, floor, and roof according to the above construction.

Single glass U is 1.13.

Walls 12 in. etc. U is .34.

Floor U is .33.

Roof U is .18.

Ceiling of vestibule U is .6.

Double walls 24 in. etc. U is .2. (This is computed.)

The basement temperature should be assumed at 95° F. because it is

Problem: Calculate Cooling Load for This Department Store

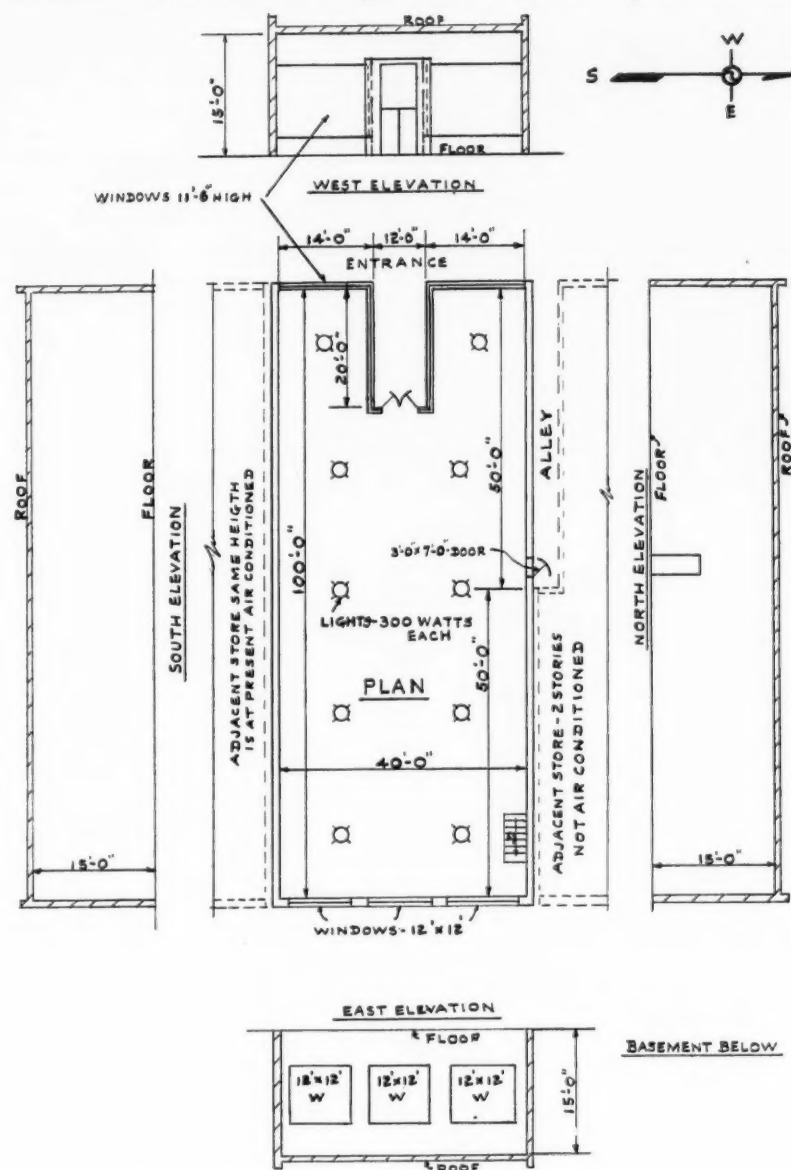


Fig. 3 represents a small department store to be air conditioned. The accompanying text shows how the cooling load is calculated.

not entirely a storage space. Where such basements are entirely storage and no other heat but general lighting may occur, the temperature may be assumed between 85° F. and 90° F.

STEP NO. 3

Set up inside design conditions.

According to the type of store it should be figured for an effective temperature of 74° F. This means that we can use an inside d.b. temperature of 80° F. and 50% relative humidity.

STEP NO. 4

Set up all outside and inside conditions which are to be used in the calculations.

	Outside	Inside
D.b. temperature	95° F.	80° F.
W.b. temperature	75° F.	67° F.
D.p. temperature	66° F.	60° F.
Relative humidity	38%	50%
Effective temperature	83° F.	74° F.
Total heat B.t.u./lb.	37.81 B.t.u.	31.15
Grains/lb.	95.9	77.3
Grains/cu. ft.	7.1	5.8
Cu. ft./lb.	14.40	13.81

Use conditions as called for in Steps No. 1 and 3 and by referring to the psychrometric chart the remaining conditions can be found.

STEP NO. 5

Normal Transmission B.t.u./Hr.

Total north wall

100 ft. x 15 ft. = 1,500 sq. ft.

Wall adjacent to store

50 ft. x 15 ft. = 750 sq. ft.

750 sq. ft. x .2 x 15° = 2,250

Door

3 ft. x 7 ft. = 21 sq. ft.

21 sq. ft. x 1.13 x 15° F. = 354

Remainder of wall

1,500 - 750 - 21 = 729 sq. ft.

729 sq. ft. x .34 x 15° F. = 3,720

Total south wall same as north

wall—1,500 sq. ft. This is a common wall between two air conditioned spaces. Does not have to be included.

Total east side

40 ft. x 15 ft. = 600 sq. ft.

Glass (3) windows

3 x 12 ft. x 12 ft. = 432 sq. ft.

432 sq. ft. x 1.13 x 15° F. = 6,322

Remainder is wall

600 - 432 = 168 sq. ft.

168 sq. ft. x .34 x 15° F. = 857

West side

Front windows

2 x 14 ft. x 11 ft. = 322 sq. ft.

of glass

322 sq. ft. x 1.13 x 15° = 5,458

Vestibule windows

2 x 20 ft. x 11 1/2 ft. = 460 sq. ft.

of glass

460 sq. ft. x 1.13 x 15° = 7,797

Door and transom

12 ft. x 12 1/2 ft. = 150 sq. ft.

of glass

150 sq. ft. x 1.13 x 15° = 2,543

Wall

40 ft. x 3 1/2 ft. = 140 sq. ft.

140 sq. ft. x .34 x 15° = 714

Wall

40 ft. x 1 ft. = 40 sq. ft.

40 sq. ft. x .34 x 15° = 204

Total floor area

(40 ft. x 100 ft.) = (12 ft. x

20 ft.) = 3,760 sq. ft.

3,760 sq. ft. x .33 x 15° = 18,500

Total roof area

40 ft. x 100 ft. = 4,000 sq. ft.

4,000 sq. ft. x .18 x 15° = 10,800

Ceiling of vestibule

12 ft. x 20 ft. = 240 sq. ft.

240 sq. ft. x .64 x 15° = 2,305

Total Normal

Transmission (A) = 61,824

(Continued on next page)

The Low-Temp Patrolmen!

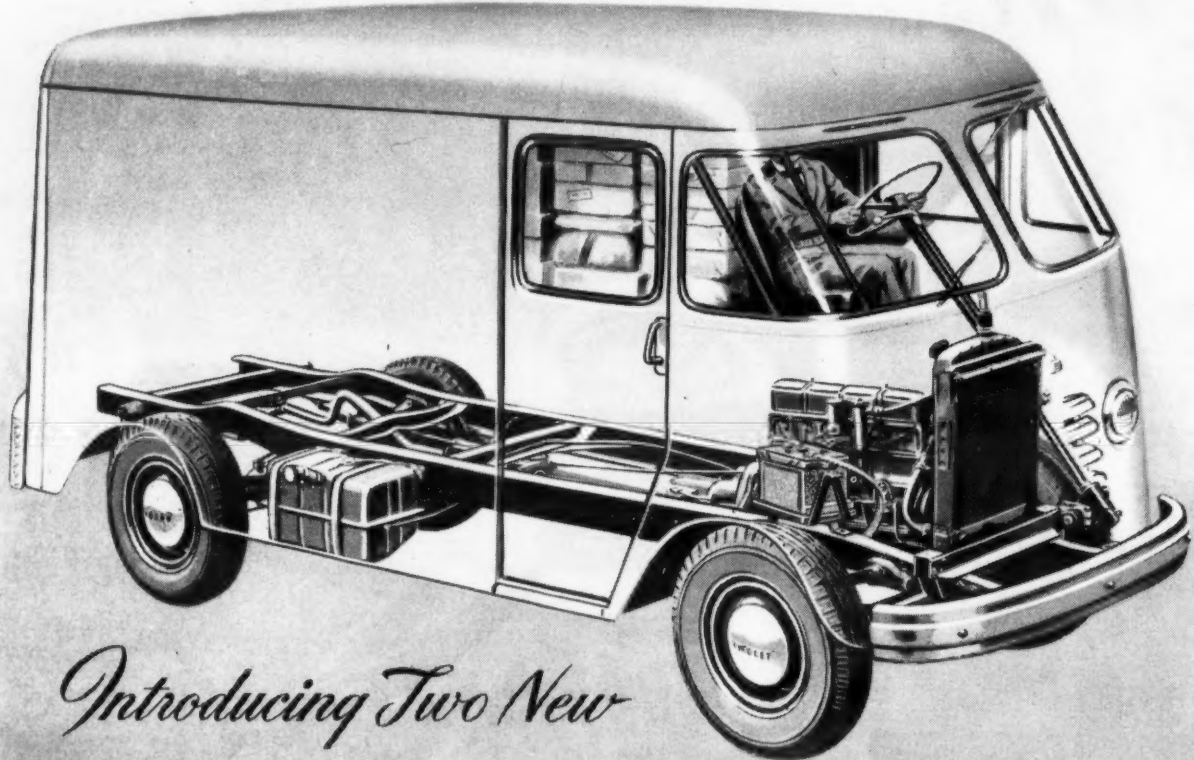
LEAKS? LEAVE IT TO ME TO FIND 'EM!

THAWZONE, in new, reconditioned or old systems, has a two-fold purpose: (1) To destroy moisture already present. (2) To safeguard against future trouble in systems now operating satisfactorily.

BOTH ARE ESSENTIAL TO REFRIGERATION MAINTENANCE

TRACE spots leaks... present or future. Its vivid stay-red color indicates them plainly. Add it to any refrigeration system and be ready for the red signal.

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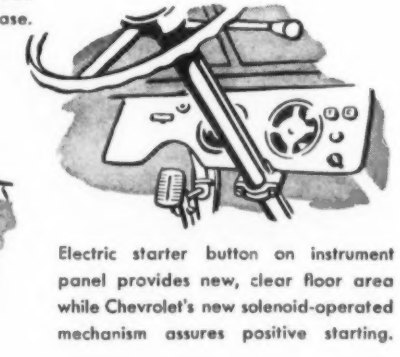
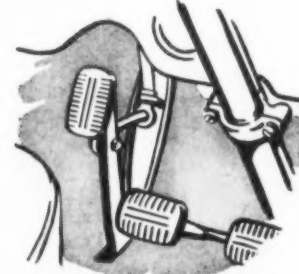
Introducing Two New CHEVROLET Dubl-Duti CHASSIS (FORWARD-CONTROL)

Illustrated above is the 125 1/4" wheelbase Forward Control Chassis—bumpers optional equipment.



Parking is easier due to better maneuverability and small turning radius.

The new Advance-Design Forward Control Chassis double cubic load space without additional wheelbase.



Electric starter button on instrument panel provides new, clear floor area while Chevrolet's new solenoid-operated mechanism assures positive starting.

Increased safety and operating efficiency is provided by the unique, new foot-operated parking brake.



Chevrolet's Advance-Design steering column gearshift control (on 125 1/4" wheelbase with three-speed transmission) creates new driving ease and convenience.



Here's the big news in door-to-door delivery! Chevrolet announces two new Chevrolet DUBL-DUTI Forward-Control Chassis... ready now for standard body installations that double the cubic load space of conventional panel trucks on the same wheelbase. Think what this means in terms of bigger payloads, fewer trips, greater operating efficiency. Consider, too, that these new Chevrolet Dubl-Duti Chassis are ADVANCE-DESIGN throughout... rugged, feature-studded, economical to operate and maintain. Chevrolet Dubl-Duti Chassis are great additions to a great line of lowest price Chevrolet trucks. See your Chevrolet dealer for complete information.

Forward Control Chassis Model 3742

125 1/4" wheelbase; three-speed transmission; gross vehicle weights of 6,200 to 7,000 lbs. Adaptable to nine- and ten-foot bodies.

Forward Control Chassis Model 3942

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CHEVROLET MOTOR DIVISION, GENERAL MOTORS CORPORATION
DETROIT 2, MICHIGAN

**ADVANCE-DESIGN
CHEVROLET
TRUCKS**

Chart Aids In Determining Air Conditioning Load

NAME OF JOB DEPARTMENT STORE DATE
 LENGTH 100' WIDTH 40' HEIGHT 12' SQ. FT. FLOORSPACE 3260 VOLUME 39120 cu. ft.

CONDITIONS		NORMAL TRANSMISSION		BTU/HOUR
OUTSIDE	DRY BULB	95°	80°	2250
75°	WET BULB	67°		3720
66°	DEW POINT	60°		
38%	REL. HUM.	50%		
37.8/	T.H. BTU/H	3115		
95.9	GRS./CU. FT.	77.3		
7.1	GRS./CU. FT.	5.8		
83°	EF. TEMP.	74°		
14.40	CU. FT./#	138/		

Ventilation Blinds
 GLASS - 100' x 40' x 10' = 4000
 VENT - 100' x 40' x 10' = 4000
 ROOF - 4000' x 18' x 35' = 25200

PEOPLE, LIGHTS & MISCELLANEOUS
 PEOPLE - 141 x 220 BTU = 31020
 LIGHTS - 3000 WATTS x 3.4 BTU = 10200
 ELEC. EQUIPMENT
 GAS EQUIPMENT
 STEAM EQUIPMENT

A+B+C=INTERNAL SENSIBLE HEAT = D = 172014

FAIR REQUI. = D-BTU/HOUR 172014 = 2020 CFM. 3350 = 3 L.H.P. 3000

FAN & DUCT HEAT GAIN
 FAN - HP. 3.1 x 2545 = 7890 BTU + DUCT - D 172014 x 5% = 8600 BTU = E = 16490
 D+E = 188504

VENTILATION
 1700 CFM x 60 x .018 x 15° = G = 27540
 F+G=TOTAL SENSIBLE HEAT = H = 216044

LATENT
 PEOPLE & MISCELLANEOUS
 PEOPLE - 141 x 240 BTU = 33840
 ELEC. EQUIPMENT
 GAS EQUIPMENT
 STEAM EQUIPMENT

INTERNAL LATENT HEAT = I = 33840

VENTILATION
 1700 CFM x 60 x (GRS. CU. FT. ENT. 7.1 - GRS. CU. FT. LEAV. 5.8) x 154 = J = 22500
 I+J=TOTAL LATENT HEAT = K = 56340

H+K=TOTAL HEAT GAIN = L = 272384

CORRECTED AIR REQUIRED = D-BTU/HOUR 172014 = 8600 CFM. 1.08 x DTD 18.5

"ST" RATIO = 79 AIR CHANGES = 9 TONS OF REFRIGERATION = 22.7

Chart 1 shows how all the data needed for determining the cooling load calculations (heat gain) can be arranged in convenient form. The figures given are for the department store shown in Fig. 3.

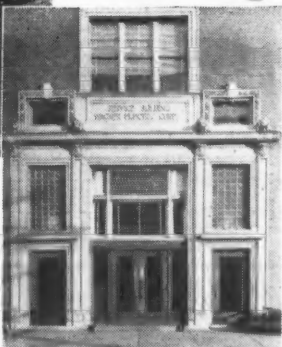
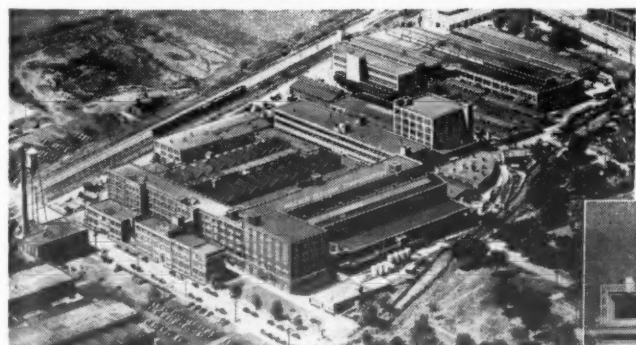
Calculating the Cooling Load--

(Continued from preceding page)

Solar Heat	B.t.u./Hr.	West glass (awnings)
East wall	13,356	322 sq. ft. x 40 B.t.u. = 12,880
168 sq. ft. x .34 x 10° =	570	As the east side has greater solar heat gain than the west side, the east side solar heat gain should be used.
East glass (venetian blinds)		Roof
432 sq. ft. x 100 B.t.u./sq. ft. =	43,200	4,000 sq. ft. x .18 x 35° = 25,200
West wall		Total solar heat gain (B) = 68,970
140 sq. ft. x .34 x 10° =	476	

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 ST. LOUIS 14, MO., U. S. A.

ELECTRICAL AND AUTOMOTIVE PRODUCTS

STEP NO. 7

Occupancy
 121 patrons + 20 clerks = 141 totals
 141 x 220 B.t.u. per person = 31,020
 Lights
 Total lights = 3,000 watts
 3,000 watts x 3.4 B.t.u./watt = 10,200
 Total for occupancy and Lights (C) = 41,220

STEP NO. 8

Total internal sensible heat gain.
 (A) 61,824 B.t.u.
 (B) 68,970 B.t.u.
 (C) 41,220 B.t.u.

Total internal sensible heat gain (D) = 172,014 B.t.u.

STEP NO. 9

Total approximate c.f.m. required.
 172,014 B.t.u.
 C.f.m. = 1.08 x 17° = 9,350

STEP NO. 10

Fan heat gain.
 Motor to be outside of air conditioning space and outside of casing.
 9,350 c.f.m. = 3.1 hp.
 3,000 c.f.m. 3.1 hp. x 2,545 B.t.u./hp. = 7,890 B.t.u.
 Duct heat gain.
 Casing to be outside of air conditioned space.
 (D) 172,014 B.t.u. x 5% = 8,600 B.t.u.
 Total fan and duct heat gain (E) = 16,490 B.t.u./hr.

STEP NO. 11

Internal sensible heat gain (D) = 172,014 B.t.u.
 Fan and duct heat gain (E) = 16,490 B.t.u.
 Total internal and fan and duct heat gain (F) = 188,504 B.t.u.

STEP NO. 12

Ventilation sensible heat gain.
 The ventilation requirements are assumed at 12 c.f.m. per person.
 141 occupants x 12 c.f.m. = 1,692 c.f.m. Use 1,700, an even number, or for 15-ft. high ceiling one air change per hour is necessary.
 56,400 cu. ft. (volume) x 1 = 940 c.f.m.
 60 minutes Therefore, in this case it is necessary to use 1,700 c.f.m.
 1,700 c.f.m. x 60 x .018 x 15° = 27,540 B.t.u./hour.
 Ventilation sensible heat gain (G) is 27,540 B.t.u./hour.

STEP NO. 13

Total sensible heat gain.
 (F) 188,504 B.t.u.
 (G) 27,540 B.t.u.
 Total sensible heat gain (H) = 216,044 B.t.u.

STEP NO. 14

Latent heat gain.
 Occupancy
 141 x 240 B.t.u./person = (I) 33,840 B.t.u.
 (I) Is the internal heat gain.

Ventilation
 1,700 c.f.m. x 60 x (7.1 - 5.8) x .154 = (J) 22,500 B.t.u.
 The total latent heat gain (K) = 56,340 B.t.u.
 STEP NO. 15
 Total heat gain.
 (H) Total sensible heat 216,044 B.t.u.
 (K) Total latent heat 56,340 B.t.u.

(L) Grand total heat gain 272,384 B.t.u.
 Corrected air requirements.
 Differential temperature difference (D.T.D.) between room dry bulb and entering air is 18.5°.
 172,014 B.t.u. = 8,600 c.f.m.
 1.08 x 18.5° Air changes = 9
 Tons of refrigeration.
 272,384 B.t.u./hour = 22.7 tons of refrigeration
 "ST" ratio.
 Total sensible heat (H) 216,044 B.t.u.
 Total heat gain (L) 272,384 B.t.u.
 .79 "ST" ratio.
 All of the above calculations may be placed on one sheet as shown on Chart 1.
 (To Be Continued)

Rayon Plant Conditioning

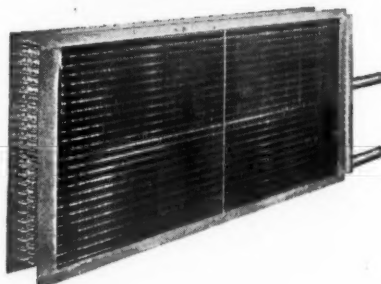
GREENWOOD, S. C.—James C. Self, president of Greenwood Cotton Mills, who has announced plans for construction of a new filament rayon weaving plant to cost between \$3,000,000 and \$4,000,000, said the plant will be fully air conditioned.



Sell

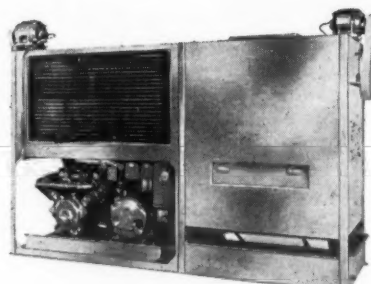
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'Coil Accessory Kit' Said To Permit 36° To -10° F. Range In a Single Coil

LOS ANGELES—A new principle in defrosting commercial refrigeration coils, which is claimed to make possible a temperature range in one coil from 36° F. to -10°, has been developed by L. E. Carson, refrigeration engineer here.

It is Carson's plan to license manufacturers of coils who would use the "coil accessory kit" by which the defrosting is accomplished. He calls his development the "All Temp" principle and Drayer-Hanson, manufacturer of coils and other refrigeration items, is using the principle in its new "All Temp Spasaver" line of commercial evaporators.

The All Temp system, Carson explains, is the practical adaptation to low temperatures of the automatic defrost method used in normal refrigeration temperature systems. The principle is based on the fact that warm air rises and can be confined under a canopy or hood. The "accessory kit" for the defrosting consists of a source of heat, and a means of confining this heat to the area surrounding the cooling surfaces. Some variations in the normal refrigeration control cycle are also involved.

Carson explains the defrost operation as follows:

"Visualize a small light placed under a metal hood. The light will quickly raise the temperature of the air confined under the hood to a point 50° or more higher than the outside air.

"If a coil and fan are also placed under the hood, the fan can circulate

air through the housing formed by the hood and across the cooling surface. The air inlet and outlet will be below the bottom level of the coil. With the fan operating, air from outside the hood is forced over the coil and this air is refrigerated.

"When the fan is stopped and the small light (or heater) is connected, sufficient heat for defrosting is accumulated within a reasonable period without affecting, to any extent, the air surrounding the hood. The hooded coil housing enables the light to act as a booster used at intervals to secure the 38 to 40° temperature required for defrosting.

"For commercial refrigeration coils we have developed two quickly applied metal elbows or deflectors which form a hood or heat trap. The addition of some low wattage heaters and a suitable defrost control switch complete the conversion and the coil designed for normal refrigeration work—it can have 1/8 in. fin spacing—is ready for operation in the below freezing temperature ranges. Hood elbows are obtainable for throwing air in any direction desired."

The method of controlling the cycle of operation of coils fitted with the All Temp defrosting kit results in defrosting only as required, instead of each cycle, Carson declared, explaining the control as follows:

"The cycle of a high temperature coil system is generally controlled with a simple single-pole, single-throw pressure actuated switch, set

'All Temp' Unit Designed for a Reach-In



This demonstration assembly of the "All Temp" coil, fitted with accessories that are said to enable it to produce low temperatures with an automatic defrosting cycle, is designed for use in a reach-in refrigerator.

to open a contact at a pressure corresponding to the desired refrigerator temperature and to make a contact at a pressure corresponding to a completely defrosted coil.

"The All Temp system controls in their most simple form can also be set to defrost each cycle in exactly the same way as the high temperature coil. The system requires only that the pressure switch have a single-pole, double-throw contact arrangement to connect the heaters when the condensing unit stops. (The wiring is arranged so that the fan stops when the condensing unit stops.) The control is set in the conventional way to cut out at a pressure corresponding to the box temperature desired and to cut in at a pressure corresponding to a completely defrosted coil.

"Defrosting during each cycle would be the most simple control arrangement. However, frost accumu-

lation on the surfaces of a low temperature coil under normal conditions takes place at a much slower rate than on a high temperature coil, because of differences in the moisture content of the air.

"For this reason it is unnecessary in most cases that a low temperature coil be defrosted more than twice a day. In many cases once every 48 hours is sufficient. Yet, because of possible extremes, the efficiency of the system can be increased greatly if defrosting takes place only as required, whether it be six times a day or twice a week.

"So in the All Temp system defrosting as required is accomplished by the addition of a thermostat control the circuit—taking advantage of a condition characteristic of all refrigeration systems.

"The thermostat cycles the fan and condensing unit in accordance with (Concluded on next page)

Model Sized for a Walk-In Refrigerator



L. E. Carson, developer of the "All Temp" coil accessory kit, with a standard ceiling mounted blower coil adapted to a low-temperature application in a walk-in box used in a Montebello, Calif. school. The heat trap hoods, heater assembly, controls, and drain arrangement are shown.

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WATER COOLERS

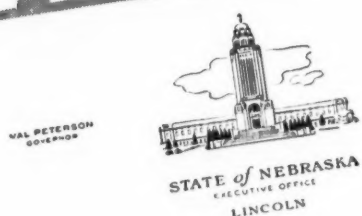
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In behalf of all citizens, I invite industry to share Nebraska's unique heritage as the continental crossroads of commerce and heart of a land unmatched in natural wealth.

Sincerely,

Val Peterson
Governor



Val Peterson

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Road of the Daily Streamliners

Accessory Kit Makes One Coil Applicable To Over-all Range

(Concluded from preceding page)

the box temperature. The pressure switch is set at a point corresponding to a coil temperature a degree or two below the coil temperature normally required for the desired box temperature.

"As ice is allowed to accumulate for successive cycles and as this ice partially restricts the air flow over the cooling unit, the coil temperature or pressure becomes progressively lower at the termination of each thermostatic cycle.

"There comes a time near the end of some cycle, after ice has accumulated sufficiently, when the defrost switch will operate in advance of the thermostat, disconnecting the fan and condensing unit and connecting the heater. This defrost switch is set on a defrost differential and reverses its action, at a temperature or pressure corresponding to a completely defrosted coil.

"An additional control feature can be added with very little cost. A reverse acting pressure control in the fan lead will allow the fan to remain off for a period after the condensing unit starts, so that the coil surfaces can be chilled after a defrost, avoiding a preliminary warm blast of air over the stored products."

No special wiring is required for the defrost circuit, it is stated. Very low wattage is used for the heaters; 150 watts in a small coil to 800 watts in the very large.

The defrost drain is 5/8 in. copper tubing. A 10 to 15-watt heater is attached to the drain at the coil outlet. During the first 10 or 15 minutes of a defrost cycle this portion of the drain is heated so that when the 32° condensate water starts to flow, its temperature is boosted to 80° or so, sufficient to allow it to flow from the refrigerator. This heated section is lightly insulated, to confine the heat to the drain section.

It DID Happen Here, Says Marshal Graves

PHOENIX, Ariz.—People here are being told to tighten up their belts.

Famine? No, but Fire Marshal L. B. Graves is worried that loose belts on refrigeration units may cause fires like those which damaged a market, an auction house, and a private home during recent weeks.

"Belts get loose and the motor pulley spins, creating friction," Graves observed. "Soon the belt burns and fire spreads. It usually happens when no one is around."

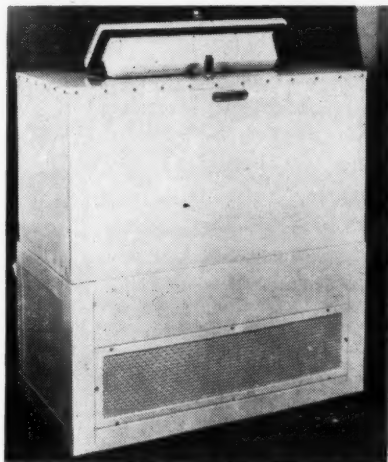
Dealership Buys Bldg.

TROY, N. Y.—Rollin C. Reynolds of the R. C. Reynolds Co., furniture and appliance firm, has purchased the Burdett Bldg. at 251-253 River St. here for \$85,000. The Reynolds Co. occupies the first floor of the five-story building.

Bank To Be Cooled

CHARLOTTE, N. C. — Ross & Witmer has the contract for installation of air conditioning equipment in the Citizens Bank here. Contract for the addition of a second floor and general renovation of the first floor has been awarded to the J. A. Jones Construction Co.

Holds -40° Temperature



Wilson testing cabinet

Wilson Testing Cabinet Has 1 1/2-Cu. Ft. Capacity

SMYRNA, Del.—A new research and testing tool for use in industrial, university, trade association, and research laboratories, is the latest development of Wilson Refrigeration, Inc., of Smyrna, Del., manufacturer of home and farm freezers, commercial refrigeration, and milk coolers.

This unique development is a small, compact low-temperature cabinet capable of holding a -40° temperature. The one shown above, built for a midwest machine tool company, is particularly useful for research and testing purposes.

The capacity of the cabinet is rated as 1 1/2 cu. ft. and has 8 in. of insulation, a new type rubber throat, and an all-steel lift lid.

Electrostatic Generator Said To Sterilize Natural Foods Without Temperature Rise

CAMBRIDGE, Mass.—An electrostatic generator that will produce X-rays of 2,000,000 volt intensity has proved to be an effective sterilizer of natural foods, such as water, milk, and fruit juices, without materially raising the temperature of those foods, according to experiments conducted in the department of physics, electrical engineering, and food technology of the Massachusetts Institute of Technology here.

The generator is claimed to be able to subject 5 tons of food to the equivalent of 1,000,000 units of X-ray energy during a period of 24 hours.

The experimenters found that the electrons manufactured by the generator were several hundred times as effective as X-rays for sterilizing foods. They said that one ionizing dose completely kills the bacteria and raises the temperature of the food only 2° C.

Contaminated raw milk with 37,000,000 bacteria per drop was subjected to the irradiation process and came out of it with 2 bacteria per drop.

Vitamin C is not destroyed by this method nearly as much as by a heat sterilization, they noted.

This method of sterilization did not work with some enzymes such as those that cause potatoes to spoil. These could be somewhat sterilized after prolonged doses, but it was not practical, the experimenters have concluded.

The radiation method works equally well in sterilizing biological materials and medical dressings, the scientists added.

College Offers Testing Facilities to Industry

NEW YORK CITY—The Phillips Cooling Tower Co. of New York City, has recently tested two package-type cooling towers in the air conditioning-refrigeration laboratories of Walter Hervey Junior college, 15 West 63rd St., New York City.

The Phillips company is the first to take advantage of the testing fa-

cilities of the college which are being offered to industry free-of-charge.

In announcing the tests, Donald E. Deyo, director of the college, said, "We feel that one of the greatest things that education can offer to industry is an open-door policy in connection with experimental work and testing in air conditioning, refrigeration, and radio-electronics."

eration, and radio-electronics."

The cooling tower tests were conducted by Hervey students majoring in refrigeration engineering and under the supervision of Charles Broder, instructor. Beginning July 28, the tests continued for two weeks.

Other testing and experimental work involving numerous types of refrigeration and air conditioning machinery will take place during the fall and winter.



LOOK FOR THIS NAMEPLATE ON QUALITY REFRIGERATION EQUIPMENT

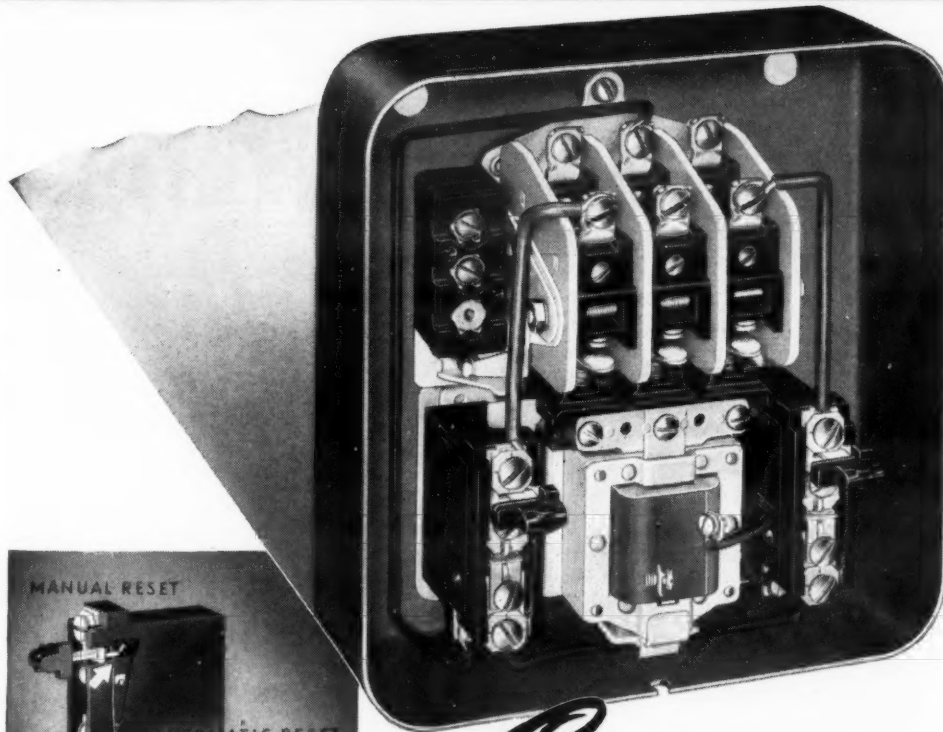


WRITE FOR ILLUSTRATED CATALOGUE

GENERAL REFRIGERATORS CORPORATION
678 BROADWAY, NEW YORK 12, N. Y. • GRAMERCY 3-1222



GENERAL'S new streamlined 14 cubic foot freezer with its gleaming stainless steel top and lids is now available for immediate delivery. Equipped with dividers and sliding baskets, it is built for lifetime trouble-free operation. Model CR14 and its big brother Model CR20 (20 cu. ft.) are a source of profit to the dealer and satisfaction to his customer.



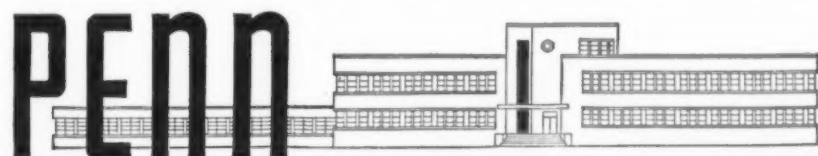
Check the features of PENN'S
new magnetic line starters

They're new...compact...convenient to install. They're precision-built to provide fast opening and closing of contacts. They're sturdily built, to meet severest operating conditions, to give long life and maintenance-free operation.

Overload relays are adjustable for automatic or manual reset. The middle illustration above shows how simply this is done by merely changing the spring position. To prevent food spoilage, automatic reset in refrigeration applications is often necessary. In other automatic installations safety

requires lock-out until relay is manually reset.

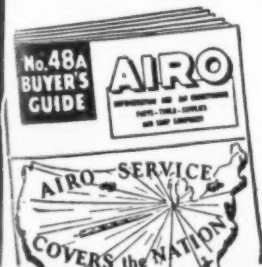
Available with Type 1 enclosures or as open type models for control panels. Complete panels, including the appropriate Penn automatic control for pressure, temperature, and humidity regulation, are ideal for air conditioning and refrigeration service. Built in sizes 0, 1, and 1 1/2. Ask your wholesaler, or write now for Bulletin 2705 containing detailed information. Penn Electric Switch Co., Goshen, Ind. Export Division: 13 E. 40th St., New York 16, U.S.A. In Canada: Penn Controls Ltd., Toronto, Ontario.



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Carrier Gets Contract To Air Condition India's First 3 Rayon Producing Plants

NEW YORK CITY — The first three rayon producing plants in India's history will all be equipped with air conditioning systems by Carrier Corp., the company's International Division announced.

The latest India contract for process refrigeration and air conditioning has just been received by Carrier from National Rayon Corp., Ltd., Bombay. National Rayon's production, coupled with that of Travancore Rayons, Ltd., and Sirsilk, Ltd., both also to be Carrier equipped, will substantially relieve India's rayon yarn shortage.

Principal Carrier equipment to be

furnished will be a pair of centrifugal refrigeration machines totaling 1,200 hp. One of the units will be additionally used to heat water for the mill's bleaching requirements, an auxiliary function intended to effect substantial savings in over-all heat balance. The National Rayon plant will be the first of its kind with this operating refinement, it is claimed.

Concluding negotiations for the refrigerating and air conditioning systems took place in New York City. Volkart Bros., of Bombay, Carrier distributor for India, which handled the sale, was represented by Emil A. Bertsch, while John Rachal, Africa-

India regional manager, was present for Carrier International.

The National Rayon contract is the seventh overseas postwar rayon contract to be concluded by Carrier International and its representatives. In addition to the three Indian mills, Carrier equipment is being used in new plants in Cuba, Brazil, Peru, and Chile.

Distributor Buys WAA Building

SYRACUSE, N. Y. — The Morris Distributing Co., 412 S. Clinton St., distributor of electrical appliances, has purchased a six-story building in W. Fayette St. for \$240,000 from the War Assets Administration. Morris Horowitz, president of the company, said plans for utilization of the property have not yet been formulated.

'Head Full of Ideas' Pays Off

James D. Harden, youngish president of International Mfg. Co. is already laying out plans for the expansion of his firm. With orders piling up for the one-ton unit, Harden maps production of the conditioners in 2 to 5-ton sizes.



Year-Old Firm Finds Ready Market For Easily Movable 1-Ton Room Cooler

OKLAHOMA CITY—An Air Force veteran who came back from the wars with a head full of ideas for a different type of room air conditioner is successfully digging a foothold in the air conditioning industry here.

Although he started his International Mfg. Co. from scratch less than a year ago, James D. Harden has not only started producing a one-ton air conditioner but he has trebled his production facilities and is on the threshold of further expansion in the form of a new factory.

Harden's air conditioner is a remote type unit that he claims can be installed at low cost "without wrecking the place." The unit, which is said to have a 12,000 B.t.u. per hour capacity, is housed in a compact cabinet measuring 27 in. high, 22 in. wide, and 10 in. deep.

It sits on the floor and can be placed anywhere within a room. Refrigerant lines are run along the baseboards like electrical wiring to the condensing unit which can be placed in any central location.

Because it requires no ductwork, no permanent electrical or water connections, and can be moved about almost at will, great economies in installation are claimed for the unit. As many as 50 of them can operate off one condensing unit, Harden stated.

Harden said that his 1-ton unit is engineered to cool a 2,500-cu. ft. room under normal conditions. It is equipped with two rotary blowers, delivering between 400 and 420 c.f.m., an expansion valve, solenoid, and thermostat. These controls are hooked up so that the thermostat turns off the fan and the solenoid, which, when closed, causes the compressor to cut out. Therefore, no special wiring is required, he said.

Harden pointed out that his unit is equipped with a six-row coil where a four-row coil would be sufficient to handle the load. This additional coiling, he said, gives at least 100% greater humidification than competitive units.

The cabinet, which comes in either a walnut grain or blonde mahogany finish, is made entirely of aluminum, thus eliminating rusting. Filters are provided.

The unit is shipped to dealers without a compressor, thus permitting the dealer to select the size compressor needed to do the job, Harden said. Ten of his units, he declared, will enable a dealer to meet all requirements.

"Next year we plan to produce this unit in a 2-ton, 3-ton, and 5-ton size to give our dealers and distributors a crack at the commercial field," Harden asserted. "We are also planning an evaporative condenser in a 5, 7½, and 10-ton size."

The youthful president of International Mfg. started production on his 1-ton air conditioning unit last November. He introduced it to the trade through an advertisement in AIR CONDITIONING & REFRIGERATION NEWS.

This single advertisement, he testi-

fied, brought responses from all over the United States and from China, the Philippines, New Zealand, Uruguay, Brazil, Paraguay, Peru, Spain, Switzerland, and Iraq.

From it he received sufficient orders to keep him in production until May when he expanded his manufacturing facilities to three times their former size.

To date he has signed up distributors in 28 states, China, Puerto Rico, and a number of Central and South American countries.

Still operating at full capacity, Harden has started construction on a new factory for his enterprise and expects to move into it by September or October.

As a veteran himself, Harden employs only veterans in his company.

Lehman Succeeds Freimann As Frigidaire Assistant Commercial Sales Mgr.

DAYTON, Ohio — F. E. Lehman, manager of the sales and service department of Aeroproducts division of General Motors, has been named assistant commercial sales manager of Frigidaire division, W. F. Switzer,

Frigidaire's commercial sales manager has announced here. Lehman succeeds A. C. Freimann, who has been appointed general sales manager of Delco Appliance



F. E. Lehman

division, GMC.

A veteran with more than 16 years of experience in the sales and service fields, Lehman first became associated with Frigidaire in 1931 when he joined the service technical division. After serving as a field contact representative on service problems, he was placed in charge of service technical literature.

He was transferred to the commercial sales department as a sales engineer in 1937. In 1940 Lehman was promoted to zone manager, contacting midwestern districts for commercial sales. Shortly after the outbreak of World War II he was transferred to the Aeroproducts division as service manager, handling propeller service problems on a global scale for the Army Air Forces.

Lehman was promoted to manager of the sales and service department of Aeroproducts division in January of 1946. He remained in that capacity until his recent appointment.



A. C. Freimann

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CHECK with Ranco FIRST

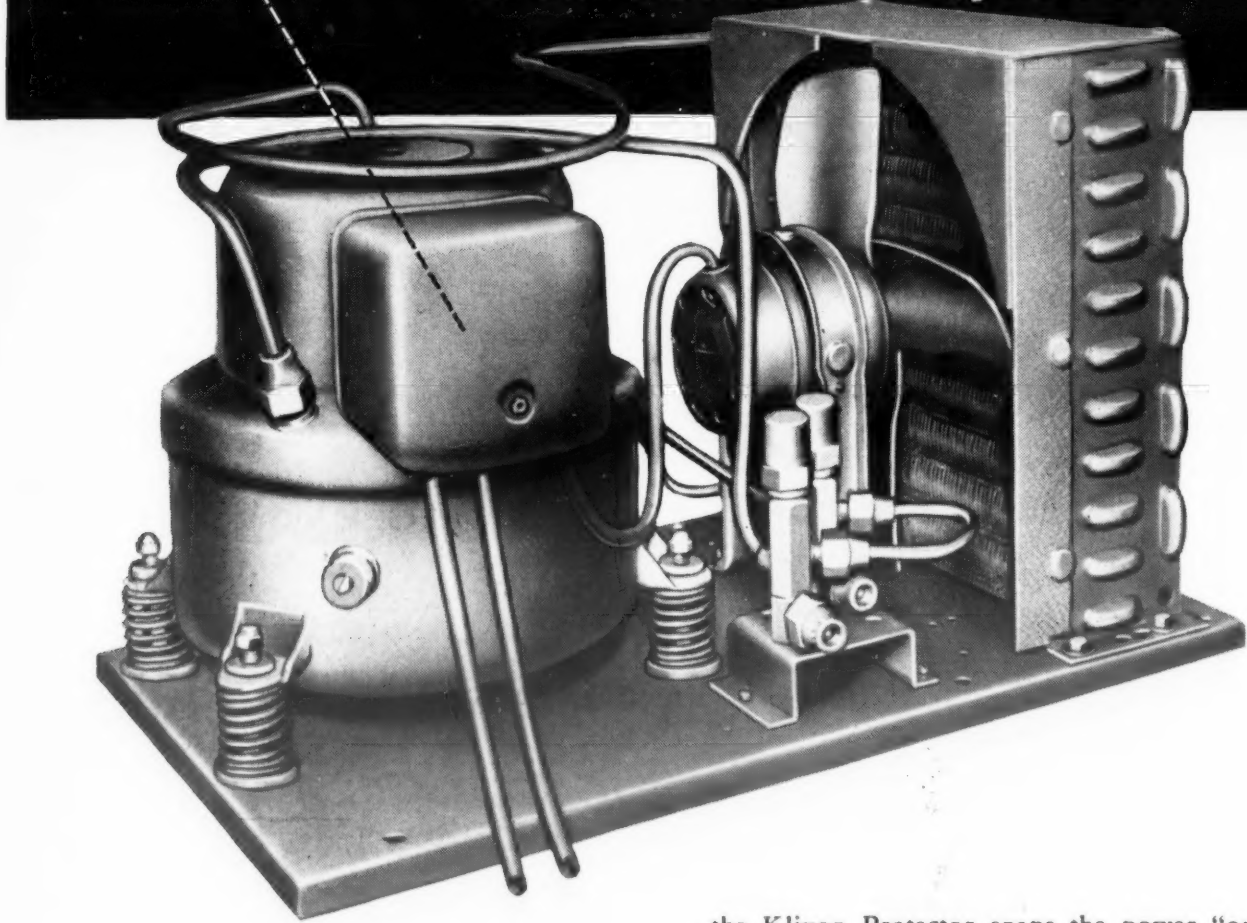
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World's Largest Manufacturers of REFRIGERATION CONTROLS

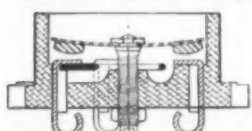
To Eliminate Motor Burnouts—Use KLIXON DOME MOUNTED PROTECTORS In All Hermetic Compressors



Here's a simple way for domestic and commercial refrigerator manufacturers to reduce the returns of hermetic units, cut service calls and keep customers sold on their brands . . . use hermetic units with Klixon dome mounted Protectors.

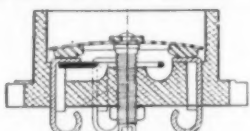
These foolproof protectors take into account all the factors that cause motor burnouts . . . clogging of condensers, poor ventilation, hot rooms, etc. . . and shut "off" the power should the motor become dangerously overheated. When the motor cools to safety,

HERE'S HOW KLIXON PROTECTORS WORK!



CLICK...IT'S OFF!

Should a motor become overheated and dangerously hot, the Klixon Protector snaps the power "off" preventing the motor from damage.



CLICK...IT'S ON!

When the motor cools to safety, the Klixon Protector snaps the power back "on" automatically.

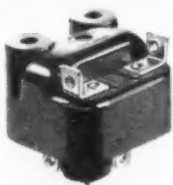
the Klixon Protector snaps the power "on" again automatically permitting the unit to maintain refrigeration thus preventing food spoilage.

Protect your refrigerators, freezers, show cases, beverage coolers and other refrigerated equipment from motor burnouts, specify and use hermetic units with Klixon dome mounted Protectors.

KLIXON

SPENCER THERMOSTAT COMPANY
2408 FOREST ST., ATTLEBORO, MASS.

KLIXON MOTOR STARTING RELAY completes the combination required to start and protect the hermetic motor. Its positive action and long life eliminate starting troubles and make it a fitting companion for the Klixon Protector used and recommended by leading refrigeration manufacturers.



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WORLD TRADE NEWS

Wheeler Dismayed by Failure of U.S. To Win Confidence of Leery Europeans

Editor's Note: In the Aug. 2 issue Mr. Wheeler, who recently returned from a tour of Europe, reported on conditions in Germany. In this issue he offers some impressions on France, Belgium, Switzerland, England, and the European picture generally.

By Hal Wheeler, of Air Comfort Corp., Chicago, and Vice President, National Association of Refrigeration Contractors

When anyone has recently returned from a trip through Western Europe, everyone he meets asks him: "How did you find things over there?"

Although no one listens to the answer you give, it is really a very difficult question to answer, and it reminds me of the story of the Frenchman who was trying to eat at a luncheon given in his honor and the woman next to him asked him: "What is your opinion of French Art?"

After swallowing carefully and thinking for quite a while, he answered:

"Haven't you any little questions?"

To me Europe is full of endless contradictions; like the Bible, you can find something in it to prove any point of view that you want to take. I have by no means sorted out my impressions and when I hear some of my friends sound off, I wish I were as sure of anything as they are of everything.

France

The French people seem to me to be delightful, and in spite of the fact that the average citizen is having a very thin time, they seem to have the only shred of gaiety left anywhere in Europe.

Contrary to most reports, I found them extremely honest. There is a crook waiting to take the unwary any place you go. The average shopkeeper in France seems to me to be a very decent citizen.

Because of local left wing regulations, the French shop is closed most of the time. It opens late, and at noon, you are literally thrown out and the proprietor goes home for a two to two-and-a-half hour lunch and nap. He closes again promptly at five or earlier. Large stores, comparable to our department stores, stay open longer, but everything is higher priced there due to a punitive tax on sales made by large stores.

It should interest members of the refrigeration industry to know that the French are simply mad about ice cream, though why they are is hard to understand as it is of horrible quality. All sorts of little places dispense it and from the crudest kind of home made equipment comparable in every way with the lemonade stands that blossom out on residential streets in the summer in the Middle West.

Dairy products are scarce in France, so the poor quality is understandable. It would seem as though there might be an opportunity for someone to export a good ice cream mix to France. Maybe that would buy us more goodwill than the Marshall Plan is getting us, anyhow it couldn't get us any less.

To a casual observer, France seems to be coming back fast industrially. With a stable government, France would probably be in good shape today from an industrial standpoint.

Telephones

I came back from my encounter with European telephones badly licked and limping. I also came back with a tremendous respect for the amount of influence good telephone service must have in this country on the tempo and zip of American business life.

If American businessmen had to contend with typical European phone service, I am confident we would slow down to a horse-and-buggy gait in a week.

Part of the trouble is due to the fact that equipment was destroyed during the war which has never been replaced, but a lot of it is due to the fact that they just never did get used to using the phone the way we do.

In most European cities, it takes longer to call a man on the phone than it does to walk over and see him.

Switzerland

This country is, of course, in a prosperous condition, in fact almost too much so.

Prices are high as measured in American dollars. American automobiles, or any other kind for that matter, sell for fantastic prices. I believe anyone who wants to take a car with him to Europe could use it while they are there and sell it in Switzerland at the end of his trip and make enough money to practically pay for the trip.

This is one of the few places where money is under no controls, and whatever money you get for anything in Switzerland, you can take out with you.

The American dollar is at a disadvantage in exchange here, one of the few places in the world where this is the case.

Belgium

I cannot claim any great familiarity with Belgium as I was there only very briefly.

The people I talked to there were proud, almost cocky, about the extent of their recovery.

You can step into a store and buy a Ford in Belgium for immediate delivery the way you would buy a hat in the United States.

The people there attribute their recovery to hard work, an explanation which, I am sure, would be very unpopular anywhere else in the world.

England

It is hard to write about England, because here the contradictions are multiple. Briefly, the best thing about England is the English people and the fact that they never complain about anything.

In France, the average person is having a thin time and the wealthy are living in luxury. In England, everybody is having a thin time, and it isn't even good form to cheat on food or clothing rations even though you can afford it.

Just bear the following facts in

mind: The average family is rationed to two fresh eggs a week which probably come from Australia and are rotten. They get 10 cents worth of meat a week, and meat is high-priced. They get a one-inch cube of soap a week. Fats and oils are on a microscopic quota. The people eat fish till it runs out of their ears.

The clothing ration is so tough that one person can just barely dress on the rations for two. People of position and prominence will kiss your hand for an old overcoat.

Businessmen are extremely bitter against the Labor Government for having let the country down and having made such a mess of trying to run a controlled economy. But these same businessmen admit that the Labor Government is there to stay for a long time.

The English have gracefully accepted their new position in world affairs. As one person put it to me: "It is a little tough after having been the chief power to be reduced to the position where, let's say, Bolivia can spit in your eye and make you like it."

It would be too much to say that everybody in England accepts this comedown in good grace, but it is not too much to say that, almost without exception, they do not grouse and they do not cheat.

Up until recently, an English car owner had a quantity of zero gasoline per week. This has been boosted to one gallon per week. As a result of these restrictions, places remote from the big cities, depending on local tourist business are dying on the vine. American tourists, of course, can get all the gasoline they want.

One of the most delightful things about the English is their ability to kid themselves as exemplified in their theater. One of their better revues has enough good lines in it to make three Broadway productions or 20 movies. The theaters start at 6:30 p.m. and are over by 9:00 which is a delightful custom, in my opinion, because you do not have to hurry through dinner.

War damage in London has largely been cleaned up so that you are looking at bare areas rather than wrecked buildings. War damage in other parts of England is rather hard to find. In a thousand-mile trip, I saw almost none of it. Anyway, any place looks good after Germany.

What They Think of Us

In general, I would say that to a casual observer, Europe is far from dead, or dying; it is in pretty good shape. I am appalled to get back here and realize what a terrific job of mutual education needs to be done. We have absolutely fallen down on trying to make anybody in Europe try to understand our intentions or motives.

On the other hand, we live here in a dream world, in which we imagine that the 16 Western nations of Europe are going to get together and form a sort of United States of Europe as a bulwark against Russian aggression. Nothing could be farther from the case. No two of these 16 nations would agree on anything, I am sure, today.

Our diplomats and economists, some of whom I met, have to be men of infinite patience and very long vision. They hope to get these nations to take some very tiny initial steps in the interest of economic self-preservation. They hope that the results of these steps will encourage them to take a few more steps, but the process is discouragingly slow and easily upset by political influences interested in upsetting it.

I do not know how we are going to give Europeans a correct picture of us; I only know that it must be done. Why Congress will appropriate five billion dollars to give to some people who hate us and hardly a nickel towards eradicating the reasons why they hate us, is hard to understand.

We can pat ourselves on the back for a lot of reasons, but not when it comes to influencing public opinion. In this respect, we are the world's worst.

Contraband Plagues Mexico

WASHINGTON, D. C. — Illegal importation of refrigerators, radios, and other articles into Mexico is on the increase and the resultant loss of customs and excise taxes is said to be of considerable proportions, according to the U. S. Embassy at Mexico City.

The Mexican press has given much space to the situation.

Every One in the Industry Should READ . . .

ONE FOOT in THE DOOR

THE LAUGH - LEARN - PROFIT BOOK
by GEORGE F. TAUBENECK

... Because Every Laugh Drives Home a SOUND SALES PRINCIPLE!

"This is a funny book," declares George Taubeneck, editor of *Air Conditioning & Refrigeration News*, in his heading for Chapter 1. That's true. You'll laugh! You'll learn, too.

"One Foot in the Door" is the laugh-and-fact-packed story of Specialty Selling. It takes you back through chuckling pages to the birth of the specialty merchandising art under John H. Patterson of N.C.R. fame, and it takes you forward—again with smiles and guffaws—to the shining future.

It clearly delineates the selling principles which years of experience

have set up—and makes them easy to remember by associating these principles with humorous anecdotes. It vigorously points up the job ahead for sales management—tells what, where, why, when, and how.

It pleads eloquently for—and points the way toward—the more efficient distribution system that will be one of the strongest bulwarks of private enterprise.

It does all this so agreeably and fascinatingly that, when you finally finish it, you'll call it the most enjoyable book you've read in a decade.



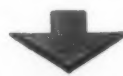
CHAPTER TITLES from "One Foot in the Door"

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|---|--|
| 1. "This Is a Funny Book" | 12. "It Pays for Itself" |
| 2. The Old Master—and How He Got That Way | 13. Ask the Man Who Uses One |
| 3. Making Direct-Mail Advertising Respectable | 14. Everybody Loves a Convention |
| 4. Hair Grows on a Billiard Ball | 15. Sales Training Schools Must Be Clever and Entertaining |
| 5. Publicity Isn't Always Free | 16. Circuit Riding Becomes a Profession |
| 6. People See Better Than They Hear | 17. Make It Clear, Make It Simple, Make It Direct |
| 7. How to Humanize Your Company | 18. Just a Minute, Dear |
| 8. Tom Thumb Cartels | 19. Five Will Get You Ten |
| 9. Finding the Rainbow's Pot-of-Gold | 20. Mama Can Help, Too |
| 10. There's Always One Best Way to Tell Your Story | 21. Ask the Man Who Does the Work |
| 11. You Can't Get Off First Base Without a Sales Manual | 22. Factory Open House Policy |
| | 23. Who Says You Can't Sell Abroad? |
| | 24. "Tell All" Promotion Rings the Bell |

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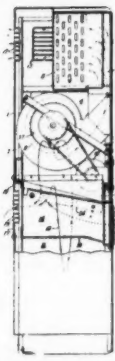
MELROSE PARK, ILL.

PATENTS

Week of May 18

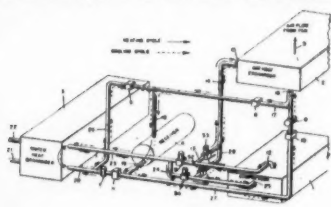
(Continued)

2,441,852. **AIR CONDITIONING APPARATUS.** Warren A. Spofford, Glen Ridge, N. J., assignor to General Electric Co., a corporation of New York. Application Dec. 12, 1946, Serial No. 715,799. 7 Claims. (Cl. 62-129.)



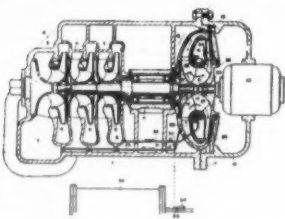
1. A room air conditioning apparatus comprising a casing having a machinery compartment and a blower compartment therein, said casing having a room air inlet and a ventilating air inlet, means providing two inlet air chambers between said compartments, one of said chambers communicating with both said inlets and the other of said chambers communicating substantially only with said room air inlet, said one chamber having an outlet communicating with said blower compartment and said other chamber having an outlet communicating with said machinery compartment, and a single air filter element extending over both said outlets for filtering all the air discharged from said two chambers.

2,441,855. **VARIABLE-SPEED DRIVE FOR COMPRESSORS.** William E. Trumpler, Olean, N. Y., assignor to Carrier Corp., Syracuse, N. Y., a corporation of Delaware. Application Jan. 15, 1945, Serial No. 572,869. 8 Claims. (Cl. 230-11.)



1. A speed control arrangement of the character described comprising a primary compressor, a unit consisting of a turbine portion and a compressor portion combined to operate in such manner that gas is compressed by the compressor portion and delivered therefrom to the turbine portion, a motor for driving the compressor portion, a first conduit for admitting gas from the primary compressor to said unit, a second conduit connecting said primary compressor with said unit to discharge gas from said unit to said primary compressor and means for controlling the admission of gas to and discharge of gas from said unit.

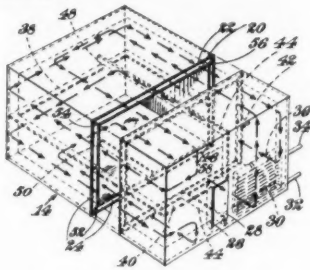
2,441,885. **HEAT PUMP CONTROL DEVICE.** Emory M. Kemler, William C. Pease, III, and Sabert Oglesby, Jr., Birmingham, Ala., assignors to Muncie Gear Works, Inc., Muncie, Ind., a corporation of Indiana. Application Dec. 26, 1946, Serial No. 718,410. 4 Claims. (Cl. 62-6.)



1. In a heat pump, a refrigerant cycle system comprising a compressor, a motor therefor, a pair of heat exchangers, and piping connecting said compressor and heat exchangers for alternating the function of said heat exchangers as condenser and evaporator respectively in the

refrigerant cycle, motorized valve means controlling said piping for reversing the refrigerant cycle with respect to said heat exchangers, a thermostat, electric circuits for separately energizing said compressor and valve means, and thermostatically controlled motorized switch operating means operable in respectively opposite directions and comprising individual switches to control said electric circuits so as to operate said compressor at opposite limits of movement of said switch means and switches to set said valve means at intermediate positions of said motorized switch operating means for reversing the refrigerant cycle in accord with the direction of movement of said motorized switch operating means.

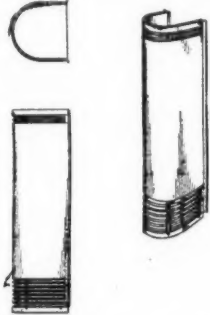
2,441,889. **METHOD AND REFRIGERATING APPARATUS FOR THE COLD STORAGE OF GOODS.** Ernest Edmund Larkin, Pinner, England, assignor to The Union Cold Storage Co., Ltd., London, England, a British company. Application March 9, 1945, Serial No. 581,764. In Great Britain March 9, 1944. 5 Claims. (Cl. 62-102.)



1. A method of refrigeration comprising the steps of circulating cooling air in a cooling space extending around an inner cold storage chamber within an outer casing, and maintaining the same cooling air in the cooling space when opening and closing the inner chamber for loading and unloading purposes characterized by circulating the cooling air over substantially the entire area of each of the top, bottom, side, front and rear end walls of the inner chamber.

DESIGNS

149,608. **DESIGN FOR A HOUSING FOR REFRIGERATOR COILS.** George K. Bentley, Kendallville, Ind., assignor to McGray Refrigerator Co., Kendallville, Ind., a corporation of Indiana. Application Oct. 4, 1946, Serial No. 133,756. Term of patent 14 years. (Cl. D67-3.)



The ornamental design for a housing for refrigerator coils, substantially as shown and described.

149,615. **DESIGN FOR A FROZEN FOOD LOCKER OR SIMILAR ARTICLE.** Laurier Carriere, Rockford, Ill., assignor to The Maytag Co., Newton, Iowa, a corporation of Delaware. Application Nov. 29, 1945, Serial No. 124,200. Term of patent 14 years. (Cl. D67-3.)



The ornamental design for a frozen food locker or similar article, substantially as shown.

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POSITIONS WANTED

TECH. MECHANIC in refrigeration, air cond., commercial ice cream freezers. All cold installations. "Freon"—Methyl-Ammonia-Sulfur. Expert in electric automatics and motors. 22 years experience in all countries—tropical inst. Speak English, French, Flemish, Dutch and German. Age 43. Going to France in September and returning in February 1949. Write to E. VANDIEVOET, c/o Cottage, 1209 Wash. St., Hoboken, N. J. for appointment before September.

EXTENSIVE 14 year background in refrigeration problems. Wide experience includes engineering design, product development, laboratory research and field applications. Thorough knowledge of application problems involving condensing units, evaporators and controls includes 4 refrigerants. Familiar with laboratory design and instrumentation also ASRE commercial code testing. BOX 2847 Air Conditioning & Refrigeration News.

REFRIGERATING & AIR conditioning engineer, who has been for 21 years with foremost manufacturers & distributors, will be available Sept. 1. Experience in machine, cabinet & unit design, application & field supervision, also as service manager. Will travel. Write BOX 2895 Air Conditioning & Refrigeration News.

HOW WOULD you like to have a man who has had six years operating refrigeration & air-conditioning equipment and can figure a job and is in the position to sell a few selected refrigerated items in the state of Florida? This man is 39 years old and not afraid of work or hours. This chap does not desire to get into the overhaul and service field but can and will see that jobs are properly installed and that the customer gets the kind of attention he deserves. This chap is ME. BOX 2896 Air Conditioning & Refrigeration News.

ELECTRIC WATER cooler specialist will consider offers, now employed as district sales manager for national company. Age 45, 20 years experience water cooler sales and service direct and through dealers and distributors in Midwest. Strong dealer and distributor following. BOX 2898 Air Conditioning & Refrigeration News.

SALES ENGINEER. Fifteen years domestic and export experience with heating, refrigeration, air conditioning. Seeking reputable organization wishing to expand its sales activities. Is now sales manager for nationally known product line. Capable of executive and operational responsibilities. Proof of ability available upon request. Interested only in top-bracket proposition. BOX 2900 Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

WANTED: SALES Engineer on refrigeration and air conditioning. Must be able to estimate and lay out his own work. Should be college graduate in Mechanical Engineering with at least five (5) years field experience. Salary, bonus, and traveling expenses. Submit qualifications with photograph to H. A. C. Smith, District Sales Manager, BAKER ICE MACHINE CO., INC., St. Louis 6, Missouri.

WANTED—SALES engineer for refrigeration and air conditioning supplies. New York City territory man with initiative and ability—can plan his own future. Applicants must have proven record in the industry. Straight commission or salary plus bonus. Protected territory. THE CAPSON CO., INC., 106-8 Rogers Avenue, Brooklyn, New York.

OPPORTUNITY FOR dairy equipment salesmen calling on refrigeration dealers. We need representatives in several territories. Agents should have kindred but not competitive lines. Product—Outstanding Packaged Aerator Milk Cooler for farm use. In first letter give references and territory now traveling. STAR PUMP & COOLER CORPORATION, 1218-24 N. 15th St., St. Louis 6, Mo.

WANTED: REFRIGERATION teacher with B.S. degree. Twelve months contract with one month's paid vacation. Should be able to teach refrigeration and air conditioning subjects to college students. Apply to J. Cecil Sharp, in care of the UTAH STATE AGRICULTURAL COLLEGE, Logan, Utah, giving experience and salary requested. A small, inexpensive photo should accompany the application.

MANUFACTURER'S REPRESENTATIVE—Some territories still open for manufacturer's representative to handle a complete line of air conditioning package units which have won national acceptance. Write complete details of your present operation and background. BOX 2905, Air Conditioning & Refrigeration News.

SALES ENGINEER—Prominent midwest manufacturer of automatic temperature and pressure control equipment has position for well qualified engineer. Experience in sales and application engineering of automatic controls desired. This is an excellent opportunity for a capable man who wishes to become associated with a progressive concern. In reply give age and full details of education and experience. BOX 2870, Air Conditioning & Refrigeration News.

SALES AND Service Engineer. Capable of taking full charge of one of the oldest and largest commercial and industrial refrigeration and air conditioning dealers in New Jersey; must be able to estimate lay out and supervise installations. Write full details of qualifications, experience, age, and salary expected. BOX 2881 Air Conditioning & Refrigeration News.

DISTRICT MANAGER—Store fixtures. Excellent territory open in Southern Ohio, Indiana, Kentucky, West Virginia, for aggressive district sales manager, to assist distributors in layout and sale of supermarket and other fixtures. An unusual opportunity, with a nationally known manufacturer of fixtures. Our entire sales organization knows of this ad. Write BOX 2882, Air Conditioning & Refrigeration News.

WANTED—ONE commercial refrigeration and air conditioning installation and service man to take charge of a small service department for Frigidaire commercial distributor. Transportation necessary. Top salary. BOX 2892 Air Conditioning & Refrigeration News.

SALES OPPORTUNITY for qualified air conditioning and refrigeration salesman. Well established firm. Southern California. State age, experience and qualifications in detail. BOX 2894 Air Conditioning & Refrigeration News.

SALES ENGINEER—Prominent manufacturer of complete line of nationally known air conditioning equipment has position for qualified sales engineer. This is excellent opportunity for capable man interested in a travelling position and who has a proven record in sales, management, application engineering and handling dealers and distributors. In reply give age and full details of background. BOX 2902 Air Conditioning & Refrigeration News.

MANUFACTURER'S REPRESENTATIVE for midwest manufacturer complete line display cases, walk-in coolers and other commercial refrigerated equipment. Territories: New England states; Eastern; and Middlewest. BOX 2903, Air Conditioning & Refrigeration News.

DISTRICT MANAGERS—South-East and Mid-West territory open for aggressive sales representatives with a nationally known manufacturer of air conditioning units, condensing unit, heating & cooling coils. Experience in air conditioning sales and application engineering with national manufacturer desired. BOX 2904 Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

8500 5/8" copper return bends crimped ends. 6000' 5/8" OD type L hard drawn copper tubing. 3500 lbs. .010 x 2 3/16" copper coil strip. 1 1/2" OD Solder Mueller A 13931 refrigeration packed line shut off valve. 16 5/8" Solder Mueller A 13929 refrigeration packed line shut off valve. 3 3/4" OD Solder Henry angle refrigeration packed line shut off valve. 2 Louvers 44" x 45". 2 two way diffusers. 1 Kennard 18" x 48" finned face two row steam coil. 1 Kennard 18" x 72" finned face two row steam coil. 2 36" x 78" finned face two row steam coil. 1 24" x 27" finned face two row steam coil. 10 20" x 20" x 2" American air filters. 9000 2 3/16" x 9" copper fins punched for 5/8" OD tubing. 1000 3/4" x 4" x 20" mild plate fingers. Write: AIR-PAK COMPANY, INC., 117 Third Avenue, North, Nashville, Tennessee.

SEALED UNITS rebuilt and exchanged. Prompt service on Coldspot (sealed & semi-sealed), Chieftain, Gale, Tecumseh, Norge and many others. One year guarantee. Write for price list and shipping instructions. BRIGHTON, 16640 Log Cabin, Detroit 3, Mich.

LOOK!—THE new look in quality & prices for prefabricated sectional walk-ins, reach-ins, combinations, florist coolers, etc., etc. We are specialists in fabricated porcelain, stainless steel, and wood. Fast service. Top quality. Send us your requirements and we will be glad to supply pictures and literature. COOLER KING MFG., 6013-13 Ave., Bklyn. 19, N. Y.

FOR SALE—350 Grunows and all makes, some in working condition; need space. JAMAICA REFRIGERATION, 97-02 150 St., Jamaica, N. Y.

AMANA MODEL 200 walk-in freezer-coolers, 123 cu. ft. 8'x4'x6'10" marine bonded plywood construction. Self contained 1/2 HP Universal compressor, blower coil, 4-Dole freezer plates, factory assembled, tested & charged with "F-12." All new crated, offered subject to prior sale. Sacrifice \$550.00 F.O.B. SD/BL. MASON, BROWN & COLVILLE, INC., 1529 Walnut St., Philadelphia 2, Pa.

530 HP MILLS & PAR condensing units \$350. 5 HP Typhoon weathermakers \$350. 1 HP Amco weathermakers \$175. 50 HP Schnacke \$995. 1/2 HP Universals \$39. 1/2 & 1/4 HP Copelands \$29. 1/2 HP Sealed Universals \$59. Westinghouse 2 1/2 ton sealed self-contained Air Conditioner \$395. Some "As Is" used refrigerators. PILGRIM, 48-20 43rd Avenue, L. I. City 4, N. Y.

REFRIGERATORS, BOTH perfectly reconditioned and "as is" running and freezing available for immediate delivery. Detailed listing available. RICHMOND SALES, Route #35, Woodbridge, N. J.

FRIGIDAIRE METER-MISER terminals. Installed from the outside in a few minutes without opening the compressor or removing unit. Stops leaky terminals on 1933 to 1937 units. Part No. 1150—\$5.25 set of three. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

SEALED CROSLLEY terminals. Installed from the outside in a few minutes without opening the compressor or removing unit. No special tools needed. Stops leaky terminals on "F-12" units. Part # 1020 short model—for short Croslley terminals ("F-12" compressors with 4 mounting legs.) Part #1020 long model—for long Croslley terminals ("F-12" compressors with 3 mounting legs.) \$5.25 set of three. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

SUBJECT TO prior sale: hermetic Chieftain units—1/4 H. P., \$44.50; 1/2 H. P., \$48.50. Other well known hermetics—1/4 H. P. fan cooled, \$52.50; 1/4 H. P. fan cooled light duty, \$57.50; 1/4 H. P. fan cooled heavy duty, \$59.50; 1/2 H. P. fan cooled, \$69.50. Open units, standard makes—1/4 H. P., \$54.50; 1/2 H. P., \$64.50; 1/2 H. P., \$84.50. Above prices quoted on lots of six. All open units are 60 cycle, single phase. All above units new, carrying factory warranty. Write for unit list. Minneapolis-Honeywell, Dual press. control, \$4.50; Minneapolis-Honeywell Low press. control, \$3.00; White-Rodgers, Low press. control, \$3.25; Genuine Frigidaire Low press. control, Y L, \$4.25; Detroit Low pressure control, \$4.25; G. E. Blower fan motor with 10" fan, 110 v. 606, \$4.50; Superior Heat Exchanger, 13" overall, 3/4" x 5/8", \$4.75; Mueller Heat Exchanger, 14 1/2" overall, 3/4" x 5/8", \$5.00; Mueller Heat Exchanger, 21" overall, 1/2" x 1 1/2", \$9.00; Kayson heavy duty cooler locks, 13" overall, with set of hinges, 15" overall, complete with inside push rod and master lock and keys, \$9.50; Kramer Trenton 1/2 ton panel blower compressor, \$35.00; Vapor proof refrigerator lights, with guard, \$3.00; Filter drier, silica gel, 1/4" x 1 1/4" x 6 1/4" overall, 10, \$6.50; U. S. "Freon" gauge 4 1/2" face, 30" vac., 150# or 300# corresponding temperature scale, red warning hand, \$4.50; 5 lb. can Davison refrigeration silica gel, \$1.10; Cold plates —1-30" x 55"—2-30" x 64", 3 to a set, \$35.00. WALTER W. STARR, 1207 W. George St., Chicago 13, Ill.

REBUILD YOUR own sealed units. Send us your burnt and stuck up heads and they will be immediately replaced from our stock. Send for our complete price list. TECHNICAL REFRIGERATION SPECIALISTS, 362 East 180th Street, Bronx 57, New York.

FRANCHISES WANTED

ATTENTION MANUFACTURERS: I am establishing a manufacturer's agent sales outlet in the Middle West which will cover the states of Minnesota, Iowa, Nebraska, Kansas, Missouri, Colorado, Oklahoma, Texas, and New Mexico. This advertiser has had 18 years of refrigeration and air conditioning experience in the business and with manufacturers, jobbers, distributors, and dealers in commercial refrigeration and air conditioning equipment. Application engineering and sales experience. Representative office located in metropolitan city west of the Mississippi River. Interested in obtaining a limited number of quality, well-known, and non-competitive lines. A volume of business assured any manufacturer that has the equipment to offer and desires quality representation. Investigation of character and abilities welcomed. BOX 2906 Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

AUDEL'S REFRIGERATION & Air Conditioning Guide. A useful manual, 1280 pages. Fully illustrated, covering the theory, construction, servicing, operation and repair of household, commercial and industrial refrigeration & air conditioning. 1001 facts. Easy to understand. Highly endorsed by service men and mechanics. Price \$4 postpaid. Money refunded if not pleased. AUDEL PUBLISHERS, 49 West 23 St., New York 10, N. Y.

FOR SALE: Commercial, domestic refrigeration business established seven years; also retail ice cream business including four motor driven refrigerated vendors. New shop and attached two bedroom apartment building on large lot in fast growing Southern California town. All for \$25,000.00 easy terms. ROUTE 1, Box 227, Spring Valley, California.

WORKING PARTNER for going domestic and export heating, refrigeration, air conditioning and general contracting business to invest at least \$12,000. Must have knowledge of refrigeration, air conditioning and willing work long hours. Location New York City. BOX 2874, Air Conditioning & Refrigeration News.

MIAMI, FLORIDA. Well established Air Conditioning and Refrigeration business for sale. Volume for 1947 over \$400,000.00. Owner must retire. Will sell for net worth, approximately \$150,000.00. Terms. BOX 2879, Air Conditioning & Refrigeration News.

WILL SELL established service business ideal for husband and wife operation or for 2 men wanting to start own small business. At inventory cost. Two to three thousand dollars would handle depending on amount of inventory. Located within 100 miles of Chicago. BOX 2891 Air Conditioning & Refrigeration News.

ESTABLISHED BUSINESS in Florida over 25 years for meat market equipment. \$50,000.00. Stock and building, \$75,000.00. In the heart of town, will sell business with long lease or sell both. Terms arranged if necessary. BOX 2897 Air Conditioning & Refrigeration News.

COMMERCIAL REFRIGERATION business with nationally known franchises for fixtures, air conditioning and home freezers. Established dealer organization and direct retail accounts. Located in industrial city of Mid-West. New building built for the business doing approximately \$150,000 gross year. Will sell property, equipment, trucks, inventory complete. BOX 2899 Air Conditioning & Refrigeration News.

DOCTOR'S ORDERS! I lose, you win! Must sacrifice immediately exceptional refrigeration shop. Same location twelve years in Mid-Western city approx. sixty thousand. Commercial, domestic and air-cond. keeping 4 busy. Ideal for partners. No debts. Inventory, tools, equipment good-will. Real bargain! BOX 2901 Air Conditioning & Refrigeration News.

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Refrigeration Problems And Their Solution

By Paul Reed

For Service and Installation Engineers.



Paul Reed

Comparative Costs of Home Heating Fuels(1)

The type of heating equipment that the user, especially the home owner, selects, is bound to depend very largely on what the annual fuel bill is going to be. Even a comparatively small difference in the yearly cost of fuel spread over a 10 or 20-year period can mean much more than the difference in original costs of the equipment.

The extra additional cost of the higher priced heating plant may be more than offset by the yearly savings in fuel cost over a period of several years.

The considerable rise in the cost of some of the common fuels within the past few years has caused some shifting in the balance of costs. What, only three or four years ago, was the most economical over-all cost of heating by using one of the common fuels may, in that same locality today, be the most expensive method of heating.

In many parts of the country, for example, it is now possible to heat more cheaply with gas than with oil. Oil has risen as much as 60 or 70% in the last five years, while gas, the price of which is controlled by state bureaus, has been permitted to rise very little, if any.

In many such communities, heating by gas can now be done at lower fuel cost than heating by oil. Only a shortage of gas, or rather a lack of sufficient distribution facilities, in many cities has prevented a trend toward gas as heating fuel.

Coal stokers, formerly quite popular because they gave an "automatic" heating system at low operating cost, are becoming less desirable as higher coal prices raise the cost of operating a stoker, and its use thus results in less savings over oil or gas.

The price of electricity, like that of gas, is controlled by state commissions, and has been permitted to rise comparatively little. Thus, using electricity as a source of heat, either directly or indirectly, begins to be more competitive to other fuels, especially oil.

Perhaps this may be only a temporary condition. The electric utility companies may secure raises in electric rates from their state control boards and thereby put the comparative cost of electricity in line with other forms of energy, but for the time being, the use of electricity for heating occupies a favorable position.

RIISING FUEL COSTS FAVOR HEAT PUMP

This condition is particularly significant in view of the attention that is being given to the "heat pump" in recent years.

Any comparative cost condition between electricity and other forms of energy for heating, that favors the use of electricity, automatically favors, and tends to promote the use of the heat pump or "reverse-cycle refrigeration" for heating.

In order to make a direct dollars-and-cents comparison between the costs of heating, using the common fuels and including electricity, Table 1 has been compiled. It is based on heating a 6-room, fairly well insulated, one-story house located in the mid-west at about the latitude of the upper part of Illinois or Indiana.

This house is assumed to have a heat-loss of 135 million B.t.u. per year, or heating season. That is, the heating equipment must actually put 135 million B.t.u. of heat into the rooms of the house per year. To do this there will be some losses and these losses, due to the inefficiencies of the heating systems, have been estimated and taken into consideration in compiling the Table.

HOW TABLE 1 WAS DEVELOPED

To illustrate how the table was developed, take the first section showing the cost of heating this house using anthracite or "hard" coal, listed as the fuel in Column 1,

headed "Fuel." As indicated in Column 2, headed "Heat Content, B.t.u.," each pound of anthracite coal when completely burned is assumed to release 13,000 B.t.u.

Column 3, headed "Firing Method," shows "Hand" which means that no stoker is used and the furnace is fired by hand. Column 4, headed "Circulation Method" indicates that the air (or water if it is a hot-water furnace) is circulated by natural convection or "gravity."

Column 5, headed "Efficiency, % or COP" assumes that a hand-fired coal furnace, having gravity air (or water) circulation, will have an efficiency of 55%. That is, it is estimated that 55% of the available heat content of the coal put into the furnace will actually go into the house, and the other 45% will be lost up the chimney.

This figure of 55% is perhaps debatable, but probably represents a reasonable average efficiency of the average hand-fired coal furnace in average condition with average direct system, etc.

If a pound of anthracite coal having a heat content of 13,000 B.t.u. per pound is burned in this "average" furnace having a 55% efficiency, 55% x 13,000 or 7,150 B.t.u. will go toward heating the house, and this figure is shown in Column 6 headed "Net Heating Effect, B.t.u. per Unit." The remainder of the 13,000 B.t.u. or 5,850 B.t.u., is lost up the chimney.

If each pound of anthracite coal provides a net heating effect of 7,150 B.t.u., and 135 million B.t.u. of heating is required, then 135,000,000 ÷ 7,150 or 18,900 pounds (or a little over 9 tons) of anthracite coal will have to be burned per year to heat this house, and this amount is shown in Column 7, headed "Units per Year."

In this case the "unit" is one pound; in the case of oil it will be one gallon; for gas, one cubic foot; and for electricity, one kilowatt-hour (kwh.).

In column 8, headed "Cost per Unit" the cost of anthracite coal is assumed at \$10 per ton. So if 18,900 pounds of anthracite coal is required per year and it costs \$10 per ton, then the yearly coal cost will be \$94.50 as shown in Column 9.

Under the same conditions, with the same efficiency, but with a fuel cost of \$15 instead of \$10 per ton, the yearly coal bill will be \$142.25 instead of \$94.50. Likewise, as per line three, with anthracite coal at \$20.00 per ton, the annual fuel cost will be \$199.00.

HIGHER EFFICIENCY WITH STOKER FIRING

In the fourth line, the anthracite coal is assumed to be stoker-fired, the air (or water) circulated by fan (or pumps), resulting in the somewhat better efficiency of 65% as shown in Column 5, and a Net Heating Effect of 8,450 B.t.u. per pound. Therefore, only 16,000 lbs. (or 8 tons) per year will be required. At \$10 per ton the annual cost will be \$80; at \$15 per ton, \$120; and at \$20 per ton, \$160; as shown in lines 4, 5, and 6 respectively.

The next section of 6 lines goes through the same calculations for bituminous or "soft" coal, which is assumed to have a Heat Content of 14,000 B.t.u. per pound. Since the same efficiencies are used as for the furnace using anthracite coal, the bituminous coal shows a slightly lower usage of coal per year and at the same prices of 10, 15, and 20 dollars per ton, a somewhat lower annual fuel bill.

CALCULATING OIL COSTS

Fuel oils, numbers 1, 2, and 3, of heat contents 136,000, 138,500, and 141,000 B.t.u. per gallon respectively, are shown in the next section, each at prices of 12, 14, and 16 cents per gallon. Only automatic (oil burner) firing and only forced air or water circulation are assumed, resulting in an estimated efficiency of 70%.

These three types of oils, each at 12, 14, and 16 cents per gallon, therefore, show an annual oil cost of from \$171.36 to \$218.72.

CALCULATIONS FOR GAS AS FUEL

In the next section, devoted to natural and artificial gas, natural gas is given a heat content of 1,000 B.t.u. per cubic foot, and artificial gas 550 B.t.u. per cubic foot. These vary in different parts of the country and with the utility supplying the gas, but these values probably represent

reasonably accurate averages.

Firing method is of course "automatic" and efficiencies of 75% and 80% are assumed for gravity and forced circulation methods respectively.

Three rates for each gas are assumed, 40, 45, and 55 cents per thousand cubic feet for the natural gas and 55, 60, and 65 cents per

thousand cubic feet for the artificial gas. These will vary greatly throughout the country but the values given may be assumed for comparison.

These heat contents, efficiencies, and costs per 1,000-cubic foot units, result in annual fuel costs of from \$72 to \$93 for natural gas and from \$180 to \$199.50 for artificial gas.

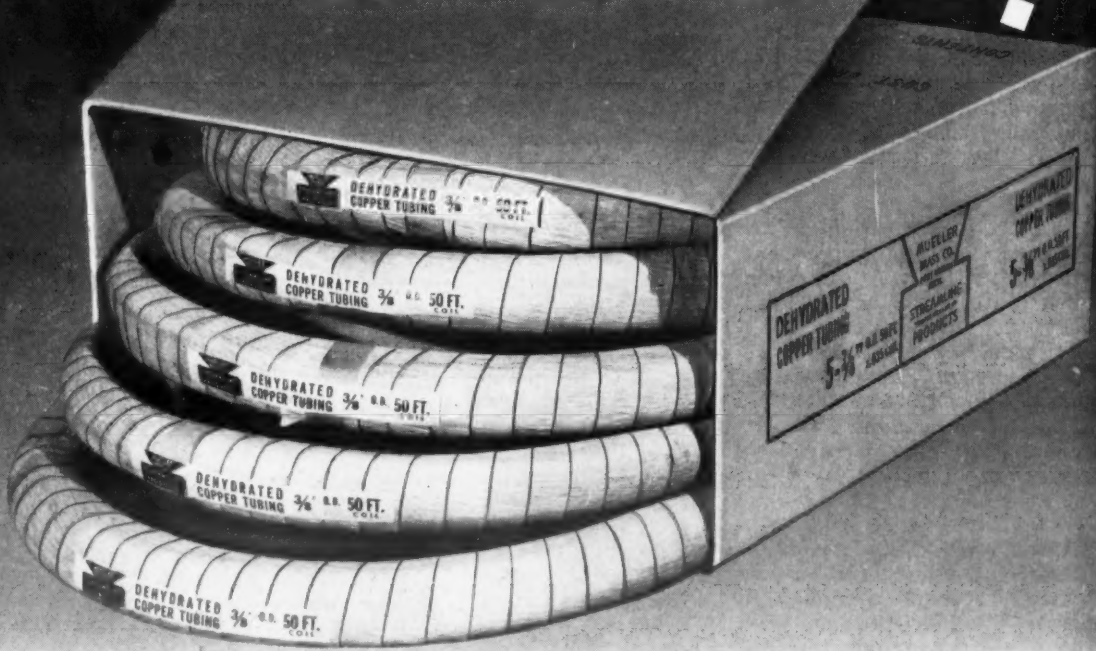
(To Be Continued)

TABLE 1—COMPARATIVE FUEL COSTS

For a 6-Room Insulated House with a Heat Loss of 135,000,000 B.t.u./Year

1	2	3	4	5	6	7	8	9
Fuel	Heat Content B.t.u.	Firing Method	Circulation Method	Efficiency % or COP	Net Heating Effect B.t.u. per Unit	Units per Year	Cost of Fuel—\$	Total Yearly Fuel Cost—\$
Coal—Anthracite	13,000/Lb.	Hand	Gravity	55%	7,150	18,900	10/Ton	94.50
"	"	"	"	"	"	"	15/Ton	142.25
"	"	"	"	"	"	"	20/Ton	199.00
"	"	Automatic	Forced	65%	8,450	16,000	10/Ton	80.00
"	"	"	"	"	"	"	15/Ton	120.00
"	"	"	"	"	"	"	20/Ton	160.00
Coal—Bituminous	14,000/Lb.	Hand	Gravity	55%	7,700	17,532	10/Ton	87.65
"	"	"	"	"	"	"	15/Ton	131.47
"	"	"	"	"	"	"	20/Ton	175.30
"	"	Automatic	Forced	65%	9,100	14,850	10/Ton	74.25
"	"	"	"	"	"	"	15/Ton	111.37
"	"	"	"	"	"	"	20/Ton	148.50
Oil—No. 1	136,000/gal.	Automatic	Forced	70%	95,200	1,428	.12/gal.	171.36
"	"	"	"	"	"	"	.14/gal.	201.92
"	"	"	"	"	"	"	.16/gal.	228.48
Oil—No. 2	138,500/gal.	Automatic	Forced	70%	96,950	1,392	.12/gal.	167.04
"	"	"	"	"	"	"	.14/gal.	194.88
"	"	"	"	"	"	"	.16/gal.	222.72
Oil—No. 3	141,000/gal.	Automatic	Forced	70%	98,700	1,367	.12/gal.	164.04
"	"	"	"	"	"	"	.14/gal.	191.36
"	"	"	"	"	"	"	.16/gal.	218.72
Gas—Natural	1,000/cu. ft.	Automatic	Gravity	75%	750/cu. ft.	180,000 cu. ft.	.40/M cu. ft.	72.00
"	"	"	"	"	"	"	.45/M cu. ft.	81.00
"	"	"	"	"	"	"	.55/M cu. ft.	99.00
"	"	Forced	"	80%	800/cu. ft.	168,750 cu. ft.	.40/M cu. ft.	67.50
"	"	"	"	"	"	"	.45/M cu. ft.	76.00
"	"	"	"	"	"	"	.55/M cu. ft.	93.00
Gas—Artificial	550/cu. ft.	Automatic	Gravity	75%	412/cu. ft.	327,670 cu. ft.	.55/M cu. ft.	180.00
"	"	"	"	"	"	"	.60/M cu. ft.	196.60
"	"	"	"	"	"	"	.65/M cu. ft.	213.00
"	"	Forced	"	80%	440/cu. ft.	306,818 cu. ft.	.55/M cu. ft.	168.75
"	"	"	"	"	"	"	.60/M cu. ft.	184.25
"	"	"	"	"	"	"	.65/M cu. ft.	199.50
Electricity	3,415/kwh.	Resistance	Gravity	98%	3,347/kwh.	40,340/kwh.	.01/kwh.	403.40
"	"	"	"	"	"	"	.015/kwh.	605.10
"	"	"	"	"	"	"	.02/kwh.	806.80
Electricity	"	Heat Pump	Forced	COP—3	10,245/kwh.	13,185/kwh.	.01/kwh.	131.85
"	"	"	"	"	"	"	.015/kwh.	197.78
"	"	"	"	"	"	"	.02/kwh.	263.70
"	"	"	"	"	"	"	.01/kwh.	113.00
"	"	"	"	"	"	"	.015/kwh.	169.50
"	"	"	"	"	"	"	.02/kwh.	226.00
"	"	"	"	"	"	"	.01/kwh.	98.90
"	"	"	"	"	"	"	.015/kwh.	148.35
"	"	"	"	"	"	"	.02/kwh.	197.80

Dehydrated COPPER TUBING!



**PERFECTLY WRAPPED—SEALED—AND
CARTONED—FOR PROTECTION AND
CONVENIENCE IN STOCKING—**

★ 1/8 THRU 1/4 .030 WALL ★ 5/16 THRU 1/2 .032 WALL ★ 5/8 THRU 3/4 .035 WALL
50 FT. LENGTHS

Mueller Brass Co. Dehydrated Copper Tube Coils are now being cartoned as an added precaution against damage and to facilitate greater ease in handling and stocking.

Within the carton, each coil is carefully wrapped and labeled for your convenience. Our Dehydrated Copper Tubing is consistently bright, clean and as dry as is humanly possible to make it. It is uniformly annealed dead soft so that it can be easily formed, bent or flared without danger of fracture.

ORDER FROM YOUR WHOLESALE

MUELLER BRASS CO.
PORT HURON, MICHIGAN

Credit Controls--

(Concluded from Page 1, Column 5)

indirect rationing, discriminating against lower income consumers, and favoring higher income groups.

"Any legislation restricting consumer credit must include all forms of consumer credit and not just instalment credit. Any legislation must prescribe equal restrictions on all commodities. These factors cannot be left to the discrimination of any government bureau."

Other Measure May Hit Inventory Financing

The other part of the credit control legislation passed by Congress, permitting the Federal Reserve System to increase the amount of reserves member banks must keep with the Reserve Banks against their deposits, can also have considerable effect on dealers in both household appliances and dealers in commercial refrigeration and air conditioning equipment.

This would come about because increased reserve requirements reduce the amount of deposits banks have for lending and investing. Banks and lending agencies thus get more selective in their loans, and dealers may find it difficult to obtain financing of their inventory, or what the lending agencies refer to as "wholesale financing." Interest rates on loans are also likely to rise.

Under the legislation passed by Congress, the Federal Reserve system would be given the right to increase the reserves of country banks to 18% from the present 14% maximum; the limit for Reserve city banks would go to 24% from 20%; while the limit for the Central Reserve city banks would be 30% instead of 25%.

Commercial Credit Head Says Controls Won't Slow Instalment Buying

BALTIMORE — The semi-annual report of Commercial Credit Co. as of June 30, shows that the total volume of receivables acquired, gross premiums written by its insurance companies, net sales volume of its manufacturing companies and its consolidated net income credited to earned surplus for the six months' period were larger than for any previous semi-annual period.

Consolidated net income was \$8,239,835, compared with \$3,308,556 for the same period of 1947, an increase of \$4,931,279, or 149.04%; and was \$12,926,689 for the 12 months ended June 30, 1948.

After payment of dividends on its cumulative preferred stock, consolidated net income applicable to the common stock was \$7,789,835, or \$4.23 per share, compared with \$2,858,556, or \$1.55 per share, for the same period of 1947.

A. E. Duncan, chairman of the board, stated that: "The distribution of new automobiles continues to be largely among fleet, preferential, and cash buyers, which results in limited deliveries to instalment buyers. The current ratio of the amount of instalment sale credit, especially on automobiles, to national disposable personal income still is well below the prewar level.

"Whether or not there is a reimposition of governmental restrictions on consumer credit as to down payments and maximum maturities on the sale of articles on the instalment plan, the company does not anticipate any difficulty in fully employing its resources.

"The postwar volume and outstandings of instalment receivables of the company showed a steady and large increase while Regulation 'W,' which restricted consumer credit, was in force, it having been discontinued Nov. 1, 1947.

"For nearly two years the company has been unwilling to accept large volume, low rate business, which would not produce a satisfactory profit, preferring to conserve its resources for more profitable business."

Water Heater Shipments Rise

NEW YORK CITY — May shipments of electric water heaters by the firms reporting to the National Electrical Manufacturers Association totaled 61,435 units valued at \$3,878,689, compared with 58,923 units valued at \$3,739,376 in April.

Wolverine Publishes Transportation Map

DETROIT — A complete and factual transportation map of the United States has just been published by the Wolverine Tube Division, here.

The map, said to be the first of its kind, includes highways, railroads, airlines, principal cities, towns, and villages.

A copy of the map may be obtained without obligation by writing the company.

New Buffalo Service Co. Opens

BUFFALO — A business name has been filed in the Erie County clerk's office for Air Conditioning Services Co., 406 Woodlawn Ave., Buffalo, by Richard W. Bartsch.

Market Cites Condensing Units' Big Cooling Job

MINNEAPOLIS — The wide range of refrigeration condensing units that go into a modern food supermarket was demonstrated in the installation of Frigidaire commercial refrigeration units installed by Commercial Refrigeration, Inc. of St. Paul in the new Klein Bros. supermarket.

To handle the display cases the following equipment was installed:

A Frigidaire model WF5150 condensing unit for two 6-ft. dairy cases; a model FW6H condensing unit for three 6-ft. cases; a model FW6J for four 10-ft. vegetable cases; a model WF5150 for three meat cases; a model WF5150 for two meat cases. A walk-in meat cooler is handled

by a Frigidaire model WF4100 condensing unit and a model CO620 cooling unit. A walk-in vegetable box has the same equipment except for two unit coolers.

The installation was rounded out by a reach-in low-temperature cabinet.

Loudon Names Distributor for Minneapolis-St. Paul District

MINNEAPOLIS — Loudon Sales, Inc., has appointed Flo-Kold Refrigerator Co., Minneapolis, as distributor for Minneapolis and St. Paul area for the Loudon and Federal line of commercial refrigeration.

L. E. Erickson, formerly with Frigidaire, will serve the Minneapolis area for Flo-Kold, while his son, Roger E., will handle St. Paul sales.

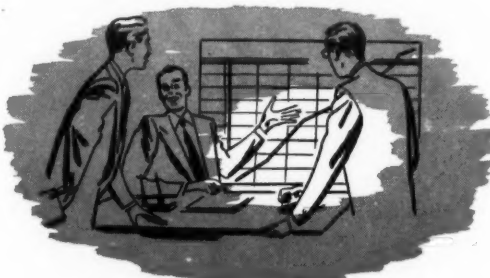
Store Claims To Be Florida's First Air Cooled Supermarket

NEW SMYRNA BEACH, Fla. — Sapps Supermarket of New Smyrna Beach made claim to being the first completely air conditioned supermarket in Florida when its new Carrier air conditioning system went into operation recently.

The system, which was installed by the Faulkner Corp. of Orlando, has 15 tons refrigeration capacity. Temperature is controlled by a thermostat.

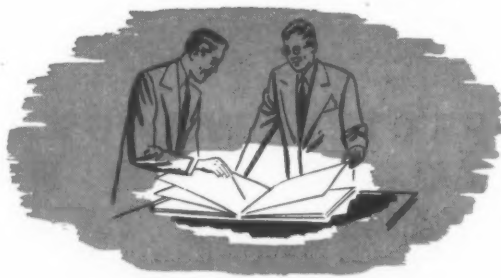
Brinkley Named Service Mgr.

SHERMAN, Tex. — J. O. Brinkley is manager of the new refrigeration service department recently opened by Kolb-Moody Electric Co.



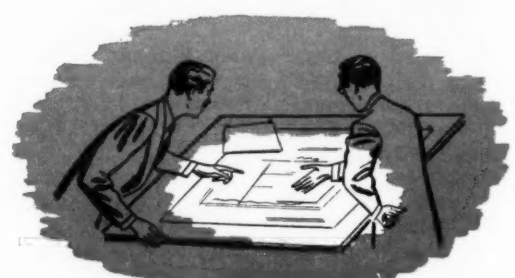
Q. THEN BEAUTY REALLY DOES INFLUENCE SALES?

A. It sure does. A recent survey by a leading market analysis firm proved beyond doubt that Weber styling is a big factor in its sales success. Don't forget, over 90% of your business comes from women, and they recognize and are influenced to buy through the beauty of Weber equipment. Merchants who are aware of this are naturally buying equipment that attracts the shopper.



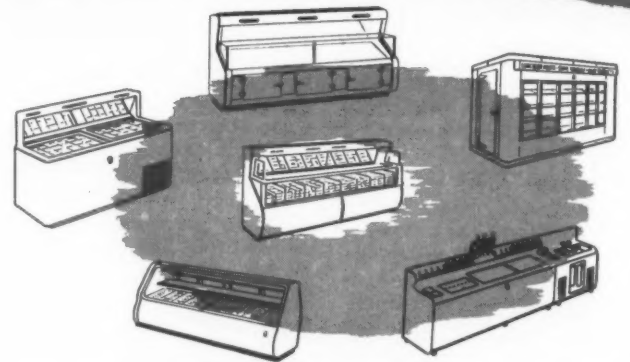
Q. WHAT DO YOU MEAN, "EXTRA FEATURES"?

A. Well, for instance: Weber Roll-A-Door Frozen Food and Ice Cream Cabinets have a patented, non-frosting track which permits doors to roll open at the lightest touch. The warmed service rail on Weber Frozel open-type low temperature self-service cases is a comfort feature which protects the customers from the shock of cold metal. Likewise the toe-recess on Weber cases makes standing comfortable for women shoppers. And there are many other exclusive features found only in Weber equipment.



Q. BUT—AREN'T PERFORMANCE AND DEPENDABILITY JUST AS IMPORTANT AS BEAUTY?

A. Frankly, yes. But Weber has both. You get perfectly balanced refrigeration, which means the quality and flavor of foods are absolutely protected. And this, combined with Weber's finer construction, gives a long-lasting, efficient, economical operation that beats competition. The beauty of Weber equipment is the "Big-Plus" no other equipment can match—it's another of the extra features Weber offers to produce greater sales.



Q. ALL RIGHT! NOW TELL ME THIS—IS THE WEBER LINE COMPLETE?

A. You bet it is! It's the *most* complete line of refrigerated equipment on the market. Whether soda fountains, ice cream or frozen food cabinets, low temperature or standard temperature self-service cases, meat cases or walk-in and reach-in refrigerators, the Weber Dealer has everything under one roof... Weber designed for beauty... Weber built for performance... Weber serviced for guaranteed results.

Weber Showcase & Fixture Co., Inc.
5700 Avalon Boulevard, Dept. 10-848
Los Angeles 54, California

Gentlemen: Kindly send me full information on Weber equipment for my business. Also name of nearest Weber representative.

PLEASE PRINT PLAINLY

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